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JOURNAL

of the Medical Association of the State of Alabama

VOL. 52, NO. 1, JULY, 1982



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See page 9

THE PATIENT THINKS HE HAS HEART TROUBLE...





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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
The clearance of Valium and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.
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S. Lon Conner
Executive Director, MASA

Physicians and the Humanistic Tradition

Much has been said lately about the desirability of re-emphasizing liberal arts in pre-medical education. Some physicians have been saying for years that, given the megadosage of science in medical school, pre-medical education should stress the rounding of the physician by an emphasis on the humanities.

Orizaba Emfinger, M.D., Union Springs surgeon and former MASA president, spoke of this in the profile on him last fall. In the May issue of the *Journal,* Jeffrey H. Cohn, M.D., Birmingham urologist and himself a product of liberal arts pre-medical education at the University of Virginia, stated the case bluntly. In his article, ''Liberal Arts in Pre-Medical Education,'' he noted that the competition for medical school acceptance has itself been the cause in recent years of the almost exclusively scientific educations of pre-medical students.

Dr. Cohn wrote:

''Over the past 10 years . . . undergraduates have taken more science courses and fewer courses in history, philosophy, literature and the social sciences. . . . During that same decade, another seemingly contradictory phenomenon has occurred: American medicine has come under attack. Two of the most painful criticisms . . . are that doctors are a narrow-minded, technically trained bunch who should no longer be thought of as members of the society of learned people [and] that American physicians are not compassionate. One cannot help but wonder if a more liberal undergraduate education might begin to restore medicine to its previous position.''

Dr. Cohn noted that only four undergraduate courses are required for admission to medical school — Physics, Biology, Inorganic Chemistry, and Organic Chemistry. The admissions brochures encourage medical school applicants to major in subjects outside of the sciences, but few do, believing their chances of medical school acceptance are greatly enhanced by massive doses of science.

Now, obviously I am no authority on medical or pre-medical education, but as a layman I know something of the role physicians have played in the history of the humanities. It has been said, in fact, that more writers got their start as physicians than in any other occupation. The names often cited include Rabelais, Keats, Chekhov, Maugham, A. J. Cronin, Jules Romains, Conan Doyle, Oliver Wendell Holmes, Sr., and others.

William Carlos Williams, M.D., may well be the most distinguished American poet of this century. Lewis Thomas, M.D., Sloan-Kettering Cancer Research Center director, has been acclaimed as one of the finest American essayists since Emerson, in the Montaigne tradition. He has two best-selling books to his credit and has won the highly prestigious National Book Award. But before the *New England Journal of Medicine* began printing his offbeat ''Notes of a Biology Watcher'' some years ago, virtually no one had ever heard of him. And he decided to write quite late in life.

The Reynolds Historical Library at UAB is rich evidence of the humanist tradition of medicine, going back to the very dawn of books. Throughout history, physicians have been leading figures in literature,

continued on page 24

* The Physician in Literature, The Saunders Press; Holt, Rinehart and Winston, Philadelphia and New York, 1982, edited and introduced by Norman Cousins, 477 pages, $16.95.

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Dalmane *(flurazepam HCl/Roche)* patients fall asleep faster, sleep longer and seldom awaken with morning hangover.

Feeling well rested in the morning usually means having slept well the night before. And for insomniac patients receiving hypnotic therapy, a good morning also means awakening with few side effects from their medication. Many physicians choose Dalmane for their patients who suffer from insomnia for this very reason.

Aside from enabling patients to fall asleep more quickly and sleep longer, Dalmane seldom causes morning hangover. Most Dalmane patients feel alert and refreshed when they awaken. In 53 paired-night clinical studies comparing Dalmane and placebo in 2010 insomniac patients with a variety of secondary diagnoses, most Dalmane patients awakened more alert and refreshed, and less groggy and drowsy, than on nights when they had taken only placebo.[1] In a double-blind crossover study of 42 patients in private practice, approximately three times as many patients reported feeling refreshed and alert upon awakening after a night on Dalmane (flurazepam/Roche) compared to placebo nights.[2] This difference was highly significant ($p<0.001$). And a retrospective study of 2542 hospitalized patients who received Dalmane revealed only a 3.1% incidence of side effects.[3]

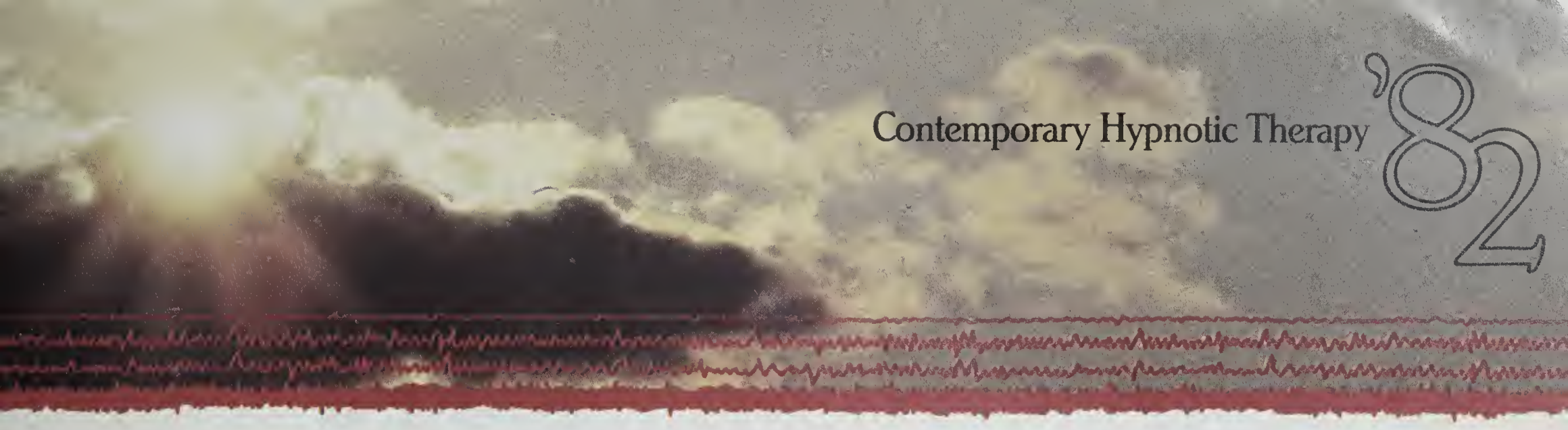
While residual effects from Dalmane therapy are infrequent, patients should be cautioned about drinking alcohol, driving or operating hazardous machinery after ingesting the drug.

Efficacy and safety in a broad range of patient types.

Over 2000 clinical trials involving more than 10,000 patients have shown that Dalmane patients fall asleep sooner, sleep longer and experience fewer nocturnal awakenings.[4] The safety and efficacy of Dalmane have been demonstrated in medical and surgical hospitalized patients, in patients seen in office practice and in elderly patients.[5-8] Since the risk of oversedation, dizziness, confu-

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sion and/or ataxia increases with larger doses in the elderly, it is recommended that the dosage be limited to 15 mg.

Moreover, the efficacy and safety of Dalmane for the treatment of insomnia have been demonstrated in thousands of patients with a variety of primary medical conditions, including cardiovascular, neuropsychiatric, endocrine-metabolic, gastrointestinal, genitourinary, respiratory and musculoskeletal disorders.[1] Dalmane (flurazepam HCl/Roche) is contraindicated in pregnancy and in patients hypersensitive to the drug.

Avoids rebound insomnia upon discontinuation.

Rebound insomnia—a worsening of sleep beyond pretherapy levels after drug discontinuation—has been reported as a potential clinical problem with some hypnotics.[9,10] However, this problem has not been reported with Dalmane. In eight out of eight sleep laboratory studies, there were no reports of rebound insomnia.[11] When you prescribe Dalmane, you can be confident of efficacy that enhances therapeutic progress. Your insomniac patients can be assured of a restful night, night after night—a good start for a good morning.

References: **1.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **3.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther 21*:355-361, Mar 1977. **4.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **5.** Meyer JA, Kurland KZ: *Milit Med 138*:471-474, Aug 1973. **6.** Feffer HL, Gibbons B: *Med Times 101*(8):130-135, Aug 1973. **7.** Jacobson A *et al*: *Psychophysiology 7*:345, Sep 1970. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 1978. **10.** Kales A *et al*: *JAMA 241*:1692-1695, Apr 1979. **11.** Monti JM: *Methods Find Exp Clin Pharmacol 3*(5):303-326, 1981.

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Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

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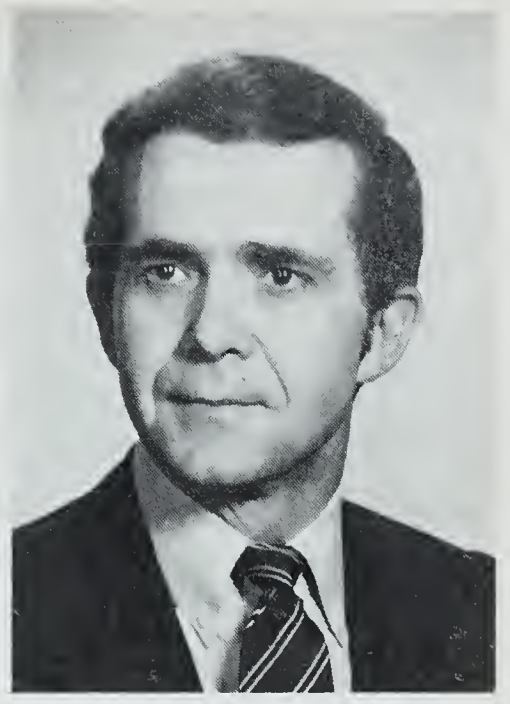
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PRESIDENT'S PAGE



Ronald E. Henderson, M.D.
President, MASA

The Gathering Storm

A cloud on the horizon, no bigger than a man's hand just a few years ago, is mushrooming with alarming speed, threatening to become part of the squawl line threatening medicine in this decade.

I refer to the gathering storm between physicians and hospitals. What was once an entirely amiable situation shows signs of strain and, in some cases, open conflict.

The seeds for the storm were first sown in the tremendous scientific advances following World War II, which required more and more medical care to be delivered in the hospital setting. Physicians became deeply involved with their patients' needs and abdicated hospital management responsibilities to others. Increased utilization, funded by the Medicare/Medicaid legislation, and the rapid proliferation of private insurance coverage, have allowed hospitals to progress from a cottage industry to the powerful institutions of today. Along the way, a new breed of administrator and trustee has evolved.

Where once the hospital governance regarded itself, and was so regarded, as being there mainly to implement the wishes and needs of its medical staff, we are now seeing administrators and trustees not very much different in their attitudes from corporate CEOs in any other business. Far too many are more interested in the profit & loss sheet than in who their chief of surgery is.

Some, because of their insulated training and the necessity for survival in what has become a highly competitive business, tend to look upon physicians as part of the hired help — not the men and women who give them their reason for being.

They are further emboldened in this stance by revealing statistics: approximately one in four physicians now works exclusively for the hospital as his employer. When all U.S. physicians with hospital arrangements are counted, fully 150,000 are already beholden in some binding measure far beyond the loyalty that has been the tradition in this country. In my field of obstetrics and gynecology, 10% of physicians have financial contracts with hospitals.

What began, logically and innocently, with in-house pathologists and radiologists, has now expanded to virtually every specialty. The case of the sudden and rapid growth of emergency medicine, with hospital emergency rooms moving into non-emergency areas once the domain of the private physician's office, is a glaring example. But there are many other encroachments.

Some administrators, feeling their oats, have become so arrogant as to say: ''Who needs the private physician? We can buy our own.'' Not only can they buy them; they have no compunction about canning them either. In an Eastern state recently, the administrator summarily replaced two superior cardiovascular surgeons with younger ones, apparently because the veteran surgeons were making too much money for the hospital's liking.

The GMENAC projection of physician surplus certainly gives aid and comfort to those administrators who have come to regard physicians as more expendable than physical plant and equipment. They think they see a buyer's market coming down the pike, with the predicted 70,000 to 125,000 physician surplus by 1990. Already, many physicians have signed away their professional birthright in hospital contracts which

continued on next page

make it clear, ever so subtly, that they work for the company store, not the patient, and has been the sacred American custom. As the excess mounts, the temptations of such blandishments can only increase, further worsening the situation.

The myopia of hospital administrators who see the buying and selling of physician services as scarcely different from buying and selling beds, food and pharmaceuticals, will, in my judgment, intensify the pressure for socialized medicine. It could corrode the one basic element that has made American medicine great — the freedom of choice of physicians.

Although a recent *New York Times* poll revealed that 50% of patients would take an assigned doctor if that would reduce medical care costs, it has been my overwhelming experience that the American patient sees his freedom to choose his personal physician as being almost inviolable. This enhances his corollary desire to remain above the faceless numbering he thinks hospitals, government and all big institutions want to relegate him to.

If the hospital governance feels no strong ties to the physicians who made it what it is today, administrators and trustees should at least be given pause by this powerful attachment American patients have to their private personal physician. The great masses of Americans want abundant free choice in everything from automobiles to ice cream.

Choice, differences of opinion, varying styles and tastes — that is what distinguishes the American consumer from his counterpart in countries that are less free.

Old Henry Ford was a production line genius, but he couldn't survive long today with his imperious statement that, "The public can have any color model T it wants as long as it's black." While administrators are servant to the budget, physicians must serve the patient. To be the patient's true advocate requires that the physician operate independently, with no third-party intervention.

Diversity and independence have been the abiding strength of private practice. Kill that, as some hospitals would in riding roughshod over fee-for-service physicians, and they may be killing the goose that laid the golden egg. It is our duty to begin telling that to hospital governance in any way that seems appropriate. We must all become more involved in strengthening the structure of medical staffs. We must continue to serve our patients by making certain that medical decisions within hospital walls are made by physicians.

It seems appropriate that physicians serve on boards of trustees when the bylaws permit, and that efforts to change the bylaws should be undertaken when they do not. Tokenism in the form of handpicked medical staff representatives is unacceptable. The hour is late but there is still time to blunt this assault on our professional sovereignty if we take an active and credible role in hospital administrative affairs.

To do less is to invite aggressive administrators to divide and conquer us by placing physicians on hospital payrolls to compete with private practitioners with the implied threat that this is the wave of the future. ⊡

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Viral Hepatitis, A Public Health Overview

C. P. St. Amant, M.D.*

Viral hepatitis is a major health problem in the world. Three virologically and immunologically distinct types have been documented: [1] Hepatitis A virus (HAV), with 100,000 clinical cases annually in the United States; [2] Hepatitis B virus (HBV), with 50,000 clinical cases annually; and [3] Hepatitis Non-A, Non-B (NANB), which recent studies have shown to be the most frequent cause of post-transfusion hepatitis and accounts for a significant number of hospitalized patients.

Although these three types may be clinically indistinguishable, it is imperative that each type be identified for epidemiological reasons, as they are transmitted by different routes and may well have different outcomes.

Hepatitis A

Onset: Usually abrupt with fever, malaise, nausea, anorexia, abdominal discomfort and jaundice. In children, most cases are asymptomatic and without jaundice.

Incubation Period: 15-50 days (average 28-30 days).

Transmission: The fecal-oral route, long hypothesized, has been proven. The virus is excreted into the environment in large quantities via the stool. This excretion, however, is extremely variable, with peak shedding preceding liver enzyme elevation, which similarly precedes the onset of symptoms. Viral excretion may vary from day to day, but generally decreases sharply over the first three weeks. There is no correlation between abundant fecal shedding and severe clinical disease. Greatest infectivity is during the two week period immediately before the onset of jaundice.

There is human epidemiological evidence confirming the transmission of HAV from healthy as well as ill individuals. Only 25% of HAV cases have had known contact with a previously ill person. Thus significant quantities of virus may be excreted in the absence of symptoms. A true carrier state, however, has not been documented.

Stability: The Hepatitis A virus is surprisingly stable in the environment, able to survive at −20 C for prolonged periods. Although stable for 39 minutes at 60 C, it is inactivated at 100 C for one minute. Shellfish that have been maintained from 24-48 hours at refrigeration temperatures have been implicated in HAV outbreaks, as well as shellfish subjected to steaming or brief cooking.

In other food-borne outbreaks, contaminated foods are those that were not cooked or those that were touched by human hands after cooking. These foods were commonly salads, but glazed donuts, custards, sliced meats and fruits may be involved, as well as water and other drinks.

Outcome: The transmission cycle is complete when the virus enters the intestinal tract of the next host. It easily survives passage through the gastric acid, pancreatic enzymes and bile salts, then enters the blood stream and

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infects the liver. The results range from asymptomatic to fulminant. For every patient with jaundice there are at least two individuals with asymptomatic infections. Children, particularly those less than three years old, manifest the mildest symptoms, yet transmission from them is considerable. Thus Hepatitis A outbreaks involving a Day Care Center are a major public health concern.

The most severe result of HAV is fulminant hepatitis. It is estimated that about 0.3% of hospitalized HAV patients develop fulminant disease, and of these, 75-80% die.

Anti-HAV of the IgG class, which appears in convalescence, appears to confirm life-long immunity. Over half of the population over age 40 have serologic evidence of past infection.

Hepatitis B

Onset: Generally insidious, with anorexia, malaise, nausea, vomiting, abdominal pain and jaundice.

Incubation Period: 45-160 days (average 60-90 days).

Transmission: Via serum or other infected blood products. However, recent studies have revealed that Hepatitis B accounts for 30-50% of hospitalized hepatitis cases in the United States, and few of these have any history of known needle or blood exposure. As many as 10% of HBV infections result in chronic carriage of HBsAg. Further epidemiological studies reveal that certain settings increase the risk of HBV infection:

1. Poverty; although the mechanism is not understood, all studies of HBV prevalence reveal the highest in the lower socio-economic settings.

2. Close contact with an individual who is viremic with HBV, such as within family units (whether the index case is a child or an adult). Prolonged follow-up revealed that 61% of such family contacts became seropositive for HBV markers.

3. Sexual partners, whether heterosexual or homosexual. There seems to be some correlation between HBV risk and the number of sexual partners.

4. Health Care workers, either medical or dental: It is estimated that this group represents two to four times the HBV risk of the general population. It should be noted that not all of these cases are able to document an overt percutaneous incident.

5. Infants born to HBsAg-positive mothers, particularly those mothers who are also HBeAg-positive. The risk from a carrier mother is considerably less than that of a mother who suffered from acute hepatitis during the last two trimesters. Most of these infants become antigenemic between one and six months of age, although occurrence prior to one month and after six months does occur. Most of the infants born to HBeAg-positive mothers will be chronic carriers.

6. Although detectable HBsAg has been demonstrated in mosquitoes in some hyperendemic areas, particularly in the tropics, experiments with chimpanzees have failed to demonstrate transmission via this vector.

Only three body fluids have been shown to contain infectious virus and to transmit disease. Hepatitis B surface antigen (HBsAg) has been documented in blood (or blood derivatives), saliva and semen. Gumline swabs are much more likely to contain the virus than is saliva direct from the salivary glands. HBsAg has been found on toothbrushes and toothbrush racks.

The Hepatitis Be antigen (HBeAg) and antibody (anti-HBe) are distinct from HBsAg and anti-HBs. The potential infectivity of a carrier is much higher if the HBeAg is present and lower if anti-HBe is present.

Stability: Once released into the environment, HBV is quite stable, and there is presumptive evidence that transmission can occur from contaminated environmental surfaces. The virus is thought to be able to survive for hours, if not days, in these circumstances. The laboratory has demonstrated survival and infectivity after heating for 10 hours at 60 C and after boiling for one minute at 100 C. A cutaneous violation or mucosal contact would still be required for transmission, however.

Outcome: At least three factors influence the outcome:

1. The route of exposure is quite important. Percutaneous injections of infectious serum, even at dilutions of 1 : 1,000,000, are known to transmit HBV infection. Mucosal transmission by oral introduction has been well documented, and the site of mucosal infection is proximal to the stomach in these cases. Pancreatic enzymes rapidly inactivate HBV. Mucosal transmission during sexual activity, although well documented epidemiologically, has yet to be proven in the laboratory.

2. The amount of infectious virus in the inoculum. The best serologic marker of infectivity at present is the HBeAg. HBeAg-positive individuals are 10 times more infectious than those who are HBeAg-negative.

3. The overall immunologic responsiveness of the host. There are two groups, newborn infants and hemodialysis patients, in which HBV infection produces chronic carriage more frequently than in other groups, approximately 50% in hemodialysis patients and probably higher in newborn infants delivered to HBeAg-positive mothers. This is thought to be due to the relative immuno-incompetence of these individuals.

HBsAg is released into the blood stream 30-60 days after infection, with liver damage appearing after another month or two. The onset of symptoms marks the end of the incubation period, which is usually three or four months after the initial infection.

The resultant disease may be acute or chronic. Acute infection may range from totally aysmptomatic to a fulminant fatal one. Clinical symptoms have been reported in only 25-50% of infected adults and in only

10% of infected children. Jaundice occurs in about 10% of adults infected by the parenteral route, and possibly in about half of those infected by close contact. In children, symptoms are even milder and jaundice is rare. After neonatal infection, symptoms and jaundice are rare. Thus, as in HAV infections, disease severity is age-related. Approximately 1% of hospitalized HBV cases are fulminant, and 75% of those die. The carrier rate is approximately 6-10% of hospitalized patients, except as noted above for newborn infants and hemodialysis patients.

Chronic manifestations are usually inflammatory, often chronic active hepatitis (CAH), which is frequently fatal, and the more benign chronic persistent hepatitis (CPH). Reports over the past few years indicate a definitive relationship between hepatic malignancy (hepatocellular carcinoma) and HBV. This incidence is particularly demonstrable in tropical hyperendemic areas.

Hepatitis Non-A, Non-B (NANB)

The diagnosis in NANB is one of exclusion at the present time. There is evidence that possibly two (or more) etiologic agents are involved. Since the exclusion of HBsAg-positive blood for blood transfusions, almost all of the posttransfusion hepatitis in the United States is NANB. Two distinct incubation periods have been documented following administration of blood products: 4-30 days following receipt of platelets or clotting factors, and 3-4 months following blood transfusions. Current research is directed toward serologic testing methods for definitive diagnosis.

Transmission: NANB agents circulate in the blood of both acute cases and chronic carriers, as in HBV, and transmission occurs via the same routes in both cases. Although the percutaneous route is most common, at least 25% of hospitalized NANB patients deny such history. NANB transmission has been reported through close family contact, between sexual partners and between prisoners.

Outcome: There is a wide range of severity for acute NANB disease, as in HAV and HBV. Many patients may be asymptomatic or have very mild disease and icteric disease may occur in as few as one third or fewer patients.

Chronic liver disease may occur, particularly in posttransfusion NANB patients. Of these, 25-50% reveal elevated liver enzymes six months after the acute phase. A high percentage of these patients have been shown to have chronic active hepatitis through liver biopsy. Cirrhosis is common in chronic disease, but is often attributed to alcoholism.

Immune Globulins

Immune globulins are sterile solutions of antibodies (immunoglobulins) from human (primarily professional) donors. Immune Globulin (IG) contains antibodies against HAV (anti-HAV) and the hepatitis B surface antigen (anti-HBs). Test lots of IG prepared since 1977 indicate that both antibodies have been present at stable titers.

Hepatitis B Immune Globulin (HBIG) is prepared from plasma containing extremely high titers of anti-HBs. HBIG has an anti-HBs titer of more than 1 : 100,000, which is about 1,000 times more than the anti-HBs content of IG.

Neither IG or HBIG, when properly prepared, transmits disease. They are for intramuscular use only and are not contraindicated in pregnant women.

IG and Hepatitis A

IG given before exposure or during the incubation period is protective. Its prophylactic value is greatest (80-90%) when given early in the incubation period. Routine anti-HAV screening is not encouraged. The use of IG more than two weeks after exposure is not indicated.

Recommendations for IG Use in Hepatitis A

A. Post-Exposure Prophylaxis
 1. Person-to-person contact
 a. Close personal contact: IG is recommended for all household and sexual (heterosexual or homosexual) contacts.
 b. Day Care Centers: These can be most important in Hepatitis A transmission, particularly in centers caring for children in diapers. IG should be administered to staff, attendees, and to all members of households whose children attend the center. Careful attention to personal hygiene after changing diapers is vital.
 c. Institutions for custodial care: living conditions in some institutions, such as prisons or facilities for the developmentally disabled, favor HAV transmission. Depending upon the epidemiologic circumstances, IG may be administered to patients and staff who have close contact with HAV patients. Thus the prophylactic measures could be limited in extent, or could involve the entire institution.
 d. Schools and preschools: such contact is usually not an important means of HAV transmission and IG is not recommended for school contacts. In the rare event that epidemiological investigation reveals a school-centered outbreak, however, it would be reasonable to administer IG to the close contacts within the school setting.
 e. Hospitals: routine IG prophylaxis for hospital personnel is not indicated. Intensive in-

continued on page 17

HYPERTENSION:



METHYLDOPA? RESERPINE? INDERAL?

COUNTLESS THOUSANDS WOULD BE BETTER OFF WITH

INDERAL®

(PROPRANOLOL HCl) B.I.D.

The sooner, the better.

Today, INDERAL—instead of methyldopa, instead of reserpine.

INDERAL exhibits few of the disturbing side effects of methyldopa and reserpine. Sedation, depression, and impotence are rare.* Tolerance is not likely to occur, as it frequently does with methyldopa. For the vast majority of patients—INDERAL means a step toward improving the quality of life. (INDERAL should not be used in the presence of congestive heart failure, sinus bradycardia, heart block greater than first degree, and bronchial asthma.)*

INDERAL blocks beta-receptor sites *in the heart* to reduce heart rate and cardiac output—reducing cardiac work load—sparing an overburdened heart.

Hypertensive hearts can rest easy with INDERAL. For many—it is ideal, first-step therapy.

INDERAL—the sooner, the better for hypertension—a leading risk factor in coronary heart disease.[1]

*Please see following page for Brief Summary of Prescribing Information.



THE MOST WIDELY PRESCRIBED BETA BLOCKER IN THE WORLD

INDERAL®
(PROPRANOLOL HCl)
B.I.D. FOR HYPERTENSION

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*
Inderal® BRAND OF **propranolol hydrochloride A beta-adrenergic blocking agent**

BEFORE USING INDERAL (PROPRANOLOL HYDROCHLORIDE), THE PHYSICIAN SHOULD BE THOROUGHLY FAMILIAR WITH THE BASIC CONCEPT OF ADRENERGIC RECEPTORS (ALPHA AND BETA), AND THE PHARMACOLOGY OF THIS DRUG

CONTRAINDICATIONS

INDERAL is contraindicated in 1) bronchial asthma, 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block; 4) cardiogenic shock; 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE: Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta-blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. INDERAL acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e.*, that of supporting the strength of myocardial contractions). In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by INDERAL's negative inotropic effect. The effects of INDERAL and digitalis are additive in depressing AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances, this has been observed during INDERAL therapy. Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, INDERAL therapy should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over.

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised. Special consideration should be given to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS DURING ANESTHESIA with agents that require catecholamine release for maintenance of adequate cardiac function, beta blockade will impair the desired inotropic effect. Therefore, INDERAL should be titrated carefully when administered for arrhythmias occurring during anesthesia.

IN PATIENTS UNDERGOING MAJOR SURGERY: beta blockade impairs the ability of the heart to respond to reflex stimuli. For this reason, with the exception of pheochromocytoma, INDERAL should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, in case of emergency surgery, since INDERAL is a competitive inhibitor of beta receptor agonists, its effects can be reversed by administration of such agents, e.*g.*, isoproterenol or levarterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (e.*g.*, CHRONIC BRONCHITIS, EMPHYSEMA), INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA: Because of its beta-adrenergic blocking activity, INDERAL may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia. This is especially important to keep in mind in patients with labile diabetes. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

USE IN PREGNANCY: The safe use of INDERAL in human pregnancy has not been established. Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit. Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity. Occasionally, the pharmacologic activity of INDERAL may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function.

ADVERSE REACTIONS

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block; hypotension, paresthesia of hands, arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia; visual disturbances, hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Miscellaneous: reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DOSAGE AND ADMINISTRATION

ORAL

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 40 mg INDERAL twice daily, whether used alone or added to a diuretic. Dosage may be increased gradually until adequate blood pressure is achieved. The usual dosage is 160 to 480 mg per day. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

While twice-daily dosing is effective and can maintain a reduction in blood pressure throughout the day, some patients, especially when lower doses are used, may experience a modest rise in blood pressure toward the end of the 12 hour dosing interval. This can be evaluated by measuring blood pressure near the end of the dosing interval to determine whether satisfactory control is being maintained throughout the day. If control is not adequate, a larger dose, or 3 times daily therapy may achieve better control.

PEDIATRIC DOSAGE

At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

INTRAVENOUS

The intravenous administration of INDERAL has not been evaluated adequately in the management of hypertensive emergencies.

OVERDOSAGE OR EXAGGERATED RESPONSE

IN THE EVENT OF OVERDOSAGE OR EXAGGERATED RESPONSE, THE FOLLOWING MEASURES SHOULD BE EMPLOYED:

BRADYCARDIA—ADMINISTER ATROPINE (0.25 to 1.0 mg). IF THERE IS NO RESPONSE TO VAGAL BLOCKADE, ADMINISTER ISOPROTERENOL CAUTIOUSLY.

CARDIAC FAILURE—DIGITALIZATION AND DIURETICS.

HYPOTENSION—VASOPRESSORS, e.*g.*, LEVARTERENOL OR EPINEPHRINE (THERE IS EVIDENCE THAT EPINEPHRINE IS THE DRUG OF CHOICE).

BRONCHOSPASM—ADMINISTER ISOPROTERENOL AND AMINOPHYLLINE.

HOW SUPPLIED

INDERAL (propranolol hydrochloride)

TABLETS

No. 461—Each scored tablet contains 10 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100.

No. 462—Each scored tablet contains 20 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100.

No. 464—Each scored tablet contains 40 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100.

No. 468—Each scored tablet contains 80 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100.

INJECTABLE

No. 3265—Each ml contains 1 mg of propranolol hydrochloride in Water for Injection. The pH is adjusted with citric acid. Supplied as 1 ml ampuls in boxes of 10.

Reference: 1. Freis, E.D. Hypertension (Suppl. II) 3:230 (Nov.-Dec.) 1981

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service education should emphasize risks of exposure to HAV and precautions necessary under these circumstances.

f. Offices and factories: routine IG is not administration to coworkers is not indicated.

2. Common Source Exposure: IG is not recommended for persons exposed to a water or foodborne common source of HAV once cases have begun to occur.
 a. Foodhandlers: IG is recommended for other kitchen employees and MAY be considered for consumers if:
 (1) The infected person is directly involved in handling foods that are not to be cooked before they are eaten,
 (2) The foodhandler's hygiene is deficient, and
 (3) Consumers can be identified and treated within 2 weeks of exposure.

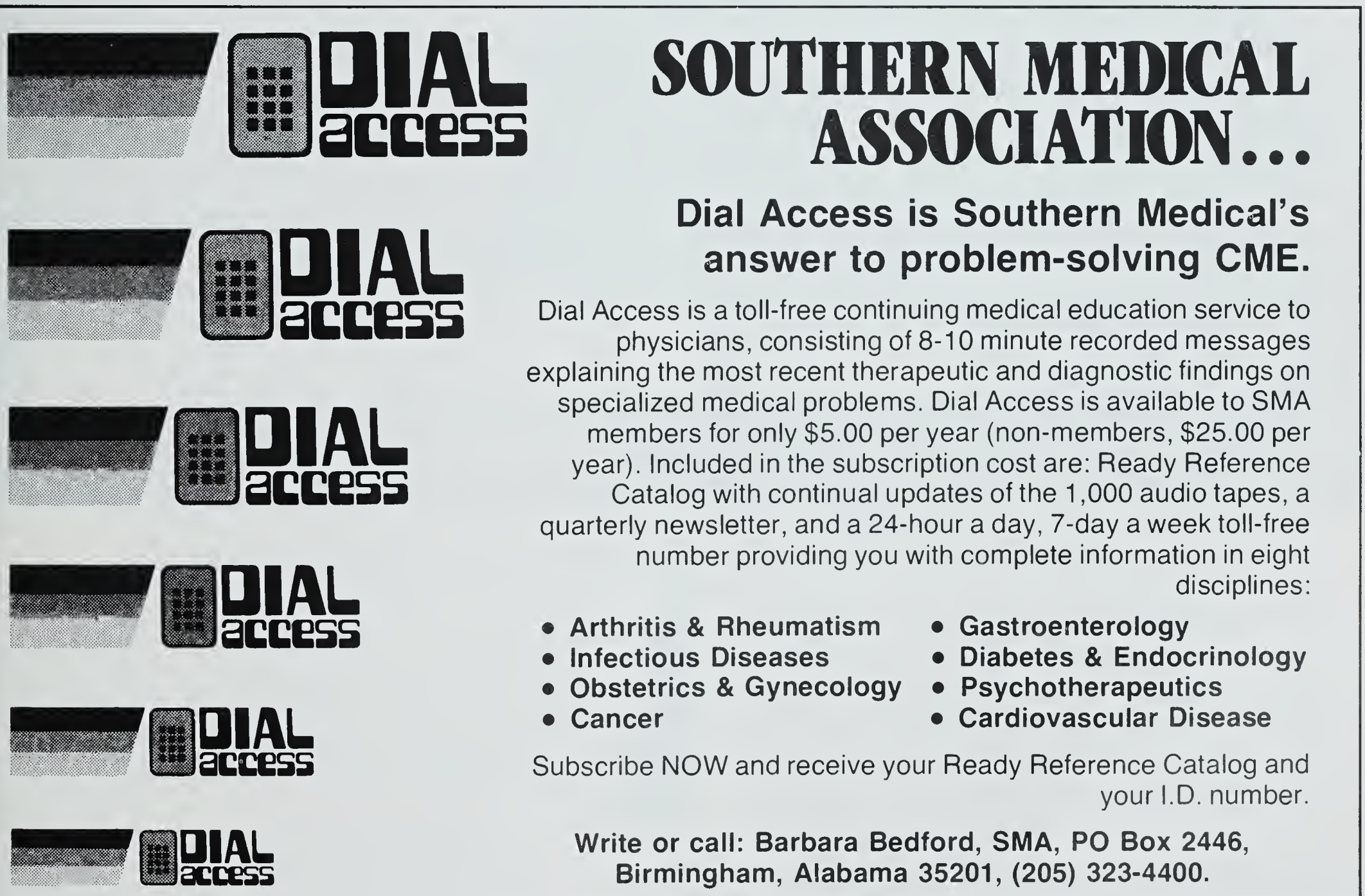
B. Pre-Exposure Prophylaxis: IG is not recommended for travelers following the usual tourist routes. Travelers to high risk areas outside of the usual tourist routes should receive 0.02 ml/kg for protection lasting up to 2-3 months. For more prolonged travel, 0.06 ml/kg should be given every 5 months.

Recommendations for HBIG Use in Hepatitis B

Post-Exposure Prophylaxis:

A. Acute exposure to blood that might contain HBsAg: In the hospital setting, the risk of clinical hepatitis B following exposure to KNOWN HBsAg-positive blood is about one in 20. If the blood is of unknown HBsAg status, the risk is about one in 2,000, or 100 times lower. For greatest effectiveness, HBIG should be administered promptly (certainly within 7 days). HBIG should be used for definite exposure to HBsAg-positive blood. However, if HBIG is unavailable or proves to be cost prohibitive, IG may be used as an alternative, since it does contain some anti-HBs, and a truly significant exposure to HBsAg may not have occurred.

1. Source known, HBsAg status positive:
 a. HBIG, 0.06 ml/kg, given immediately and repeated in one month. Should IG be used, the same dosage and schedule should be used.
2. Source known, HBsAg status unknown: because of the inherent delay in testing for HBsAg, the following guidelines are suggested:
 a. High risk that the source is HBsAg-positive, such as associated with acute, unconfirmed viral hepatitis; patient institutionalized with Down's syndrome, hemodialysis patients, persons of Asian origin, male homosexuals and users of illegal intravenous drugs.
 (1) If test results can be known within 7 days of exposure, give IG, 0.06 ml/kg, im-



mediately. If test is positive, give HBIG 0.06 ml/kg and repeat in one month. If test results cannot be known within 7 days, the decision will have to be based on the clinical and epidemiological characteristics of exposure and the availability of globulin, remembering that globulin, if used, should be administered as soon as possible.

b. Low risk that source is HBsAg-positive, such as associated with the average hospital patient. Prophylaxis in these cases is optional and testing is not recommended. If globulin is to be used at all, IG (0.06 ml/kg) should be given within 24 hours.
c. Source unknown, HBsAg status unknown: Prophylaxis is optional. If used, IG (0.06 ml/kg) should be given immediately. No further action is necessary.

3. Exposure of the newborn: infants born to mothers who are HBsAg-positive (especially mothers who are HBeAg-positive) should be treated immediately (within 24 hours) with 0.5 ml HBIG, which is the total dose. This should be repeated at 3 months and again at 6 months. IG is not recommended in these circumstances.
4. Sexual contact with Hepatitis B cases: although there is very little in the literature in this regard, it would be reasonable to expect at least some protection from the use of globulin.

Pre-Exposure Prophylaxis:

A. Staff and patients of hemodialysis units: routine prophylaxis is not recommended. Other precautions should include serologic screening of patients and staff, segregation of carriers, and environmental hygiene. Should these measures fail to interrupt transmission, globulin prophylaxis may be considered. Since HBIG has shown no additional value in this setting, IG (0.05-0.07 ml/kg) every 4 months is recommended for patients and staff.
B. Staff and patients of institutions for custodial care of the developmentally retarded: although HBV is commonly endemic in such settings, passive immunization is not recommended unless it can be shown that HBV cannot be controlled by environmental measures alone. In this event, IG may be used as outlined in the hemodialysis units above.

Prophylaxis for Hepatitis Non-A, Non-B, and Nonspecific Hepatitis

Although the value of prophylaxis cannot be determined, it is reasonable to apply the recommendations for prophylaxis against Hepatitis A.

Immunization After Immune Globulin Administration

Antibodies present in the pooled plasma from which Immune Globulin is obtained may interfere with the effectiveness of immunizing agents administered shortly after IG administration. The interference is insignificant with inactivated products, such as diphtheria, pertussis, tetanus, inactivated polio and influenza vaccines.

With live attenuated vaccines, however, the passive antibody may well interfere with viral replication, thus diminishing the patient's antibody response. Use of these vaccines, such as measles, mumps, rubella, should be avoided for at least three months after administration of Immune Globulin. This precaution does not extend to yellow fever vaccine since the pooled plasma base generally contains no yellow fever antibodies.

Alternatively, interference may also occur if IG administration becomes necessary shortly after a live attenuated virus vaccine has been given. It is generally accepted that vaccine virus replication and stimulation of immunity will occur within 7-10 days. Thus current recommendations state that if the interval between vaccine and IG is less than 14 days, the vaccine should be repeated at least 3 months after IG was administered. If this interval is 14 days or longer, vaccine need not be repeated.

Summary

This paper has been prepared as a condensed aid to the busy practicing physician. It is designed to be a review of current knowledge available from the Public Health Service, Center for Disease Control and Alabama Department of Public Health and in no way represents an exhaustive review of the subject. ⊡

References

1. Francis, D. P., and Maynard, J. E.: The Transmission and Outcome of Hepatitis A, B, and Non-A, Non-B: A Review. Reprinted by the U. S. Department of Health, Education and Welfare, Public Health Service, from Epidemiological Reviews, Vol. 1, 1979.
2. Bureau of Epidemiology and Medical Consultation, Alabama Department of Public Health: Communicable Disease Report, Vol. 3, Nos. 6, 7, 8, February, March, 1982.

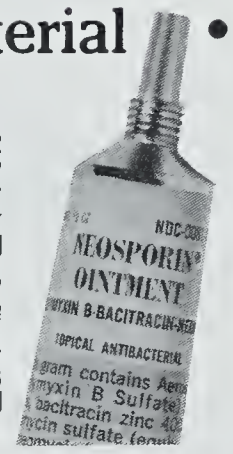
First Class First Aid



Recommend

NEOSPORIN® Ointment
(POLYMYXIN B-BACITRACIN-NEOMYCIN)

- Broad-spectrum antibacterial
- Handy applicator tip



DESCRIPTION: Each gram contains: Aerosporin® (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs; in tubes of 1 oz and ½ oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically* (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically,* the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as a failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

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The Tallapoosa County Medical Society

James E. Cameron, M.D.*

Every culture and civilization has among its people some who treat the ill and injured. In early America many of these had very meager qualifications. Prior to 1879 any man in Alabama could announce that he was competent to treat human illness or injury, do so, and charge for his services. The dictum of *caveat emptor* prevailed. Many of the so-called ''doctors'' had never seen a medical school. Others were of weird persuasions, such as one who called himself a ''Botanic Physician.''

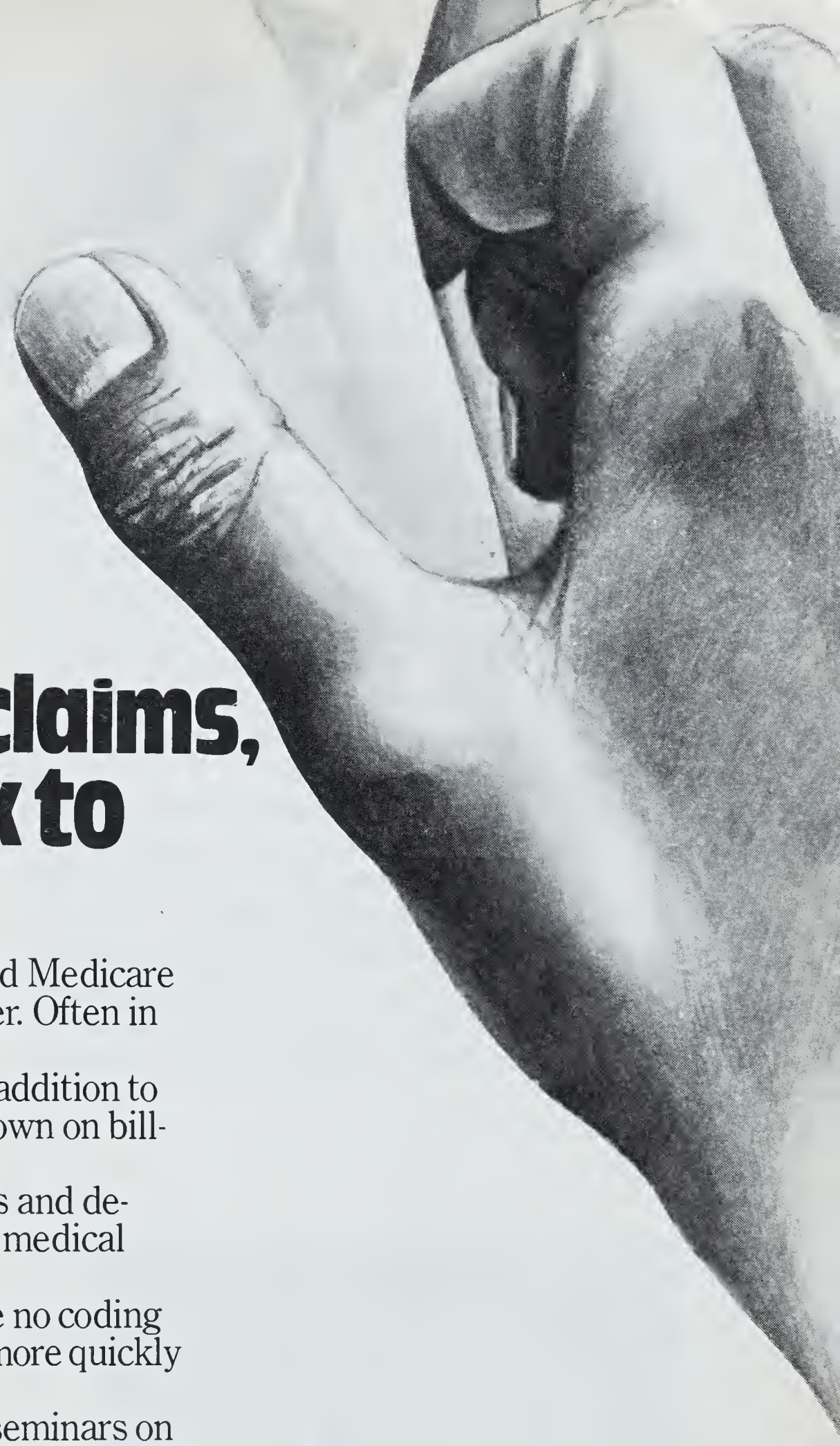
Pickett's *History of Alabama,* written in 1851, mentions a State Medical Association. However, its membership was limited to doctors of Selma and Mobile. Public transportation being limited to river travel and a few stage lines made meetings nearly impossible.

The Medical Association of the State of Alabama or MASA as we know it today was founded in 1873. The avowed objectives of this organization were and are the betterment of the public health and the protection of the public from charlatans. Both things were badly needed. It was proposed that county medical societies be chartered to carry out the objectives of the state association. Several other county societies had been chartered when in the spring of 1879 a charter was granted to eight doctors designated as the ''Medical Society of the County of Tallapoosa.'' These men lived in Alexander City, Dadeville, Island Home, New Site, Eufaula, Dudleyville, and Camp Hill. This group was soon joined by others from Walnut Hill, Jackson's Gap, Reeltown, Hackneyville, Zana, Tohopeka, and Daviston. By 1885 there were nineteen members and nine practitioners who were non-members; this latter group included one doctor who resided at Bulger's Mill.

Each county society elected its own ''Board of Censors.'' This board was the real governing board of the society. It was empowered by the legislature to give examinations and license medical practitioners. Such examinations were carried out well into the next century. By act of the legislature in 1893 there was formed a State Board of Medical Examiners and some examinations were given and licenses granted by this board as early as 1902. However, county licensure continued as late as 1907, so there was an overlapping of licensing authority during one five-year period.

The aforementioned county Board of Censors also gave examinations to prospective medical students. It is duly recorded that two such prospective students were examined and passed in 1884, one from Reeltown and one from Alexander City. It is interesting to note that one of the prospective students so examined did

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finish medical school in 1888 and practiced at Central, in Elmore County until his death in 1936. He was O. S. Justice.

No Specialists

The early members of the Tallapoosa County Medical Society were all engaged in general practice in its broadest sense. There were no specialists outside the largest cities; and these were nearly all either general surgeons, psychiatrists, or pediatricians. The doctor in this county was engaged in the delivery of babies; treating the diseases of childhood (of which there were several severe ones); caring for the injured; the management of the several fevers (malaria, typhoid, and yellow fever); pneumonias, and streptococcal infections. Tuberculosis was the number one killer. Stroke, cancer and degenerative disease in general were not so frequently met, simply because the life span was so much shorter then than it is now.

Apparently real progress was made in the upgrading of medical practice in Alabama, for the general assembly granted tremendous powers to the MASA in the session of 1893. The MASA became the State Board of Health, the State Board of Medical Licensure, the State Board of Medical Examiners. No other body of doctors anywhere carried so much authority, responsibility, or burden. Now they had the whole bundle dropped in their laps; they were responsible for the public health as well as the care of the individual as never before.

The State Health Department was granted tremendous powers and duties. Many of these could be done only by delegating power and authority at a county level. Soon there were sixty-seven County Health Officers. These men were appointed by the State Health Department with the accord of the respective County Boards of Health. They were paid from state tax funds.

The County Health Officer was called on to perform many tasks: he examined school children, food handlers, restaurants, and dairies; he gave immunizations, kept records of births and deaths, carried out quarantines of contagious disease victims, tested water supplies, was responsible for mosquito control, etc. This was all done with a minimal amount of clerical and professional help. The powers of the County Health Officer were indeed awesome, but no record of the abuse of these powers is found.

There was a close liaison between the County Health Officer and the other practitioners of the county. He was nearly always a very active member of the county medical society.

Created by MASA

The intricate interrelationship between the MASA and the county Societies could be expounded for hours. Suffice it to say that the county societies exist by reason of being chartered by the parent organization. Furthermore, the charter can be revoked for cause.

The powers, duties, activities and purposes of the county society are delineated by the constitutions of the state and county associations. The constitution of the MASA is revised and amended from time to time. The latest complete revision came in 1979. Also membership in the MASA and the American Medical Association is contingent upon membership in the local County Society.

At the April meeting of the MASA, held in Birmingham in 1912, a new charter was issued to the Tallapoosa County Medical Society. The laws covering the practice and licensure of doctors in Alabama had been drastically changed by the general assembly in 1893. The constitution of the MASA was subsequently changed and the county societies were held in a somewhat different relationship with the state association. The state association was well run and the component county societies were ready for a revision of their respective charters. The ''New Charter'' of the TCMS hangs on the wall of the county health department in Dadeville. On it are written the names of the twenty-nine members of that date. This charter still governs present day society.

Regular meetings of the TCMS were held as early as 1935; a Dutch treat supper followed by a scientific program was the format except at the December meet-



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ing, which was held at the county seat. There the activities of the society, those of the Board of Censors, the County Health Officer and an election of officers for the ensuing year took up most of an afternoon. At an early spring meeting there was a selection of delegates to the annual meeting of the MASA. The coming business of the MASA meeting was discussed and the delegates instructed in the wishes of the membership.

A MASA President

Political harmony with the doctors of the surrounding counties is attested to by the fact that one member of the TCMS was elected to and served as president of the MASA. The year was 1927; the member was Dr. A. L. Harlan. The local society has also had more than its proportionate share of counselors to the state association.

For several summers there was held a joint meeting with the Elmore County Society. This was an all-day affair with scientific papers, good food and good fellowship. The meeting was at the county border, the Old Hotel Dixie, on the north shore of Lake Martin. The attendance was uniformly good until one winter the hotel burned.

In the early 1940s, through a grant from the Guggenheim Foundation, the State Health Department engaged outstanding lecturers from Emory, Georgia, and Tulane Universities to come to Alexander City to lecture. Doctors from the surrounding counties came to the meetings at the Russell Hotel. The subjects ranged from skin grafting to heart disease. There were eight different lecturers. The honorarium given each must have been substantial, for they had to travel by train and spend several days in route.

Before 1966 poliomyelitis was of fairly frequent occurrence in Alabama. In that year a concerted effort on the part of the various health agencies resulted in the vaccination of a vast majority of the population against this dread disease. ''Polio Sundays'' were held in Tallapoosa County; these were mass vaccination exercises held at several points in the county simultaneously.

The vaccine was purchased by the TCMS and given to all who would take it. Many recipients made contributions to help offset the costs. In fact, the response was so great that a sizable amount of money remained when the expenses were paid. This was invested and the interest from this investment is used to help a medical student in the form of a loan. Moreover, because of the vaccine, polio has become a rare disease in the area.

With the help of the Auxiliary a similar attack was later made on mumps and German measles, but this time the vaccine was furnished by an agent of government and no monies collected.

The number of members of the Society has been remarkably constant, in the upper twenties or the lower thirties most of the time. The membership dropped to twelve during the World War II but rapidly recovered with the return of peace. The number of members attending the annual session of the MASA varies widely, but the constancy of the Delegates and Counselors both as to attendance and performance of duties has been very gratifying.

It seems worthy of note that certain names are found to recur on the annual rosters. Also, there were counted the names of but four members who had graduated from foreign medical schools: three from Canadian colleges or universities and one from the University of Glasgow in Scotland.

The objectives of the TCMS and of the MASA have remained unchanged over the years: the promotion of health, the promotion of safety, and abolition of charlatanism and incompetence among those who treat people. Different paths have been followed to achieve those aims, but the progress has been great. It would seem that a ''healthy future lies ahead.'' ⊡

Executive Director

continued from page 4

being by definition among the best educated of the intellectual elite. Arthur Conan Doyle, a childhood favorite of many of us, was a physician himself and modeled the great detective Sherlock Holmes on the deductive powers of a diagnostician Holmes admired at Edinburgh Infirmary, Dr. Bell.

Some medical schools are attempting to remedy what they see as a grave mistake in the removal of the physician from his long and distinguished humanistic tradition. One of them is UCLA School of Medicine, which appointed Norman Cousins as its Adjuvant Professor in Medical Law and Human Values. Mr. Cousins was for 35 years editor of the *Saturday Review;* the closest he ever came to being a doctor was as a patient. One thing led to another and Mr. Cousins has just published a brilliant anthology, *The Physician in Literature** based on his new-found interest in humanistic medical education.

With selections as diverse as those from Shakespeare and Scott Fitzgerald, Thomas Mann and William Carlos Williams, Hemingway and Keats, etc., he has divided the anthology into sections: Research and Serendipity; The Role of the Physician; Gods and Demons; Quacks and Clowns; Clinical Descriptions in Literature; Doctors and Students; The Practice; The Patient; The Enduring Tradition; and so on.

"Winds of change now blow throughout American medicine," Professor Cousins writes in his introduction. He has been encouraged to discover a "growing recognition that a good medical science puts its emphasis on research and verifiable fact; art and philosophy put the emphasis on creativity and values."

The *Journal* itself is an appropriate forum for nonclinical as well as clinical essays by Alabama physicians. We want to encourage that. Certainly many contributions to it in recent years have risen to the level of literature. You need look no further than Dr. Claude R. Brown's hauntingly beautiful "Sailing is for the Soul" in the May issue.

Who knows but what we already have here in Alabama another Thomas, Doyle, Williams, Holmes, Maugham or, heaven forbid, Rabelais. ⊡



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Expanding Applications of Therapeutic Apheresis

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Introduction

The history of therapeutic apheresis dates back to the beginning of this century[1] and the applications are rapidly expanding.[2] ''Apheresis'' or ''Apharesis'' comes from a Greek word ''Aphairein'' meaning ''to take away.'' Apheresis is a process of removing either plasma or blood cells from a patient or donor. The precise component to be removed can be designated as a prefix to ''apheresis.'' For example plasmapheresis means separation and removal of plasma. Cytapheresis, separation and removal of cellular elements, includes thrombocytapheresis, leukocytapheresis and erythrocytapheresis. The remaining blood cells or plasma are then returned to the patient or donor.

Apheresis equipment works on the principle of centrifugation and separation. Blood from the patient or donor is collected in a disposable bowl, bag or collar, depending on the type of equipment used. Centrifugation layers the individual blood components: the heaviest layer contains the red blood cells, the middle layer contains most of the white blood cells and platelets, and the lightest layer contains plasma and some of the white blood cells and platelets.

The original apheresis procedures were done manually to remove plasma for treatment of multiple myeloma in patients with hyperviscosity syndrome or to obtain plasma from healthy donors from which a variety of plasma components could be processed for component therapy.

Manual apheresis is still widely used to collect plasma for component preparations such as albumin, factor VIII, gamma globulin and Rh immune globulin and to provide fresh frozen plasma for transfusion. The inherent limitations of manual apheresis include restricted volume collection (500 ml) and the risk of reinfusing red cells into the wrong donor when two or more donors are plasmapheresed simultaneously. This spurred development of safer automated apheresis equipment. Automated continuous and discontinuous flow centrifugation equipment now provides the capability to remove selected cellular components or to exchange large volumes of plasma in a relatively short time without the problems inherent in the manual method.

Automated apheresis equipment has been twenty years in development. Its use through the years has defined clinical applicability and the risks involved in its use. Equipment may be intermittent flow centrifugation (IFC) which separates and returns successive batches of blood to the donor or patient. It has the advantage of requiring single vessel access. Other instruments employ continuous flow centrifugation (CFC) which require double vascular access, by central catheter or by surgical shunt, if necessary. CFC generally functions with a smaller extracorporeal blood volume than does IFC equipment. Automated apheresis equipment is continually undergoing technologic improvement. Currently, three companies manufacture these instruments: IBM Corporation, Haemonetics, and Fenwal. Two broad categories of usage are now widely accepted.

The most frequent is single donor component collection as was originally intended. Such platelets, white blood cells, red blood cells and plasma can efficiently be collected in therapeutic quantities from a single

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donor. The other use is therapeutic. Such plasmapheresis or cytapheresis used in acute management of certain diseases is our major consideration in this review.

Clinical Applications

Therapeutic apheresis has found its most profound application in the emergency management of patients with fulminant clinical syndromes requiring rapid selective reduction of cellular components or adverse substances in plasma. Its major applications are in crisis intervention and as an adjunctive modality to chronic disease management. It often allows time for implementation of other disease specific directed therapy. As a single therapeutic modality for either acute or chronic disease management it has been disappointing. Our review encompasses therapeutic applications of apheresis in two parts, plasmapheresis or partial plasma exchange and cell depletion or cytapheresis.

I. Plasmapheresis:
Plasmapheresis or partial plasma exchange has reported efficacy in a number of disease states. (Table I) Most clearly defined are hyperviscosity syndrome, thrombotic thrombocytopenic purpura, myasthenia gravis and Goodpasture's syndrome, which will be reviewed separately.

A. Hyperviscosity Syndrome[3]
Patients with malignant gammopathies such as multiple myeloma and macroglobulinemia, produce abnormal immune globulins in excessive amounts. These proteins can in some patients increase serum viscosity sufficiently to impede normal blood flow resulting in neurological and other ischemic deficits. Clinically it may be reflected by altered levels of consciousness, loss of vision, paralysis or even cardiorespiratory failure. These abnormal proteins may also interfere with normal coagulation mechanisms causing spontaneous bleeding.

Plasmapheresis can acutely lower the concentration of abnormal serum proteins, consequently, lowering serum viscosity, and therefore, reduce interference with blood flow and coagulation to ameliorate acute circulatory and bleeding symptoms. Effects are not permanent and patients frequently require numerous plasmapheresis treatments. The benefits of chemotherapy for malignant gammopathy are not immediate. Plasmapheresis coupled with proper replacement of fluid, electrolytes, and normal plasma proteins is the single best currently available modality for maintaining the patient free of symptoms until chemotherapy becomes effective. Frequency and volume of each exchange as well as total duration of treatment depends on the patient remaining symptom free without partial plasma exchange.

TABLE I
DISEASES TREATABLE BY PLASMAPHERESIS

1. Hyperviscosity syndrome
Multiple myeloma
Macroglobulinemia
2. Thrombotic thrombocytopenic purpura
3. Antibody-mediated diseases
Myasthenia gravis
Goodpasture's Syndrome
4. Thyrotoxicosis
5. Immune complex diseases
Glomerulonephritis
Systemic lupus erythematosis
Rheumatoid arthritis

B. Thrombotic thrombocytopenic purpura[4]
Thrombotic thrombocytopenic purpura is a disease or diseases of unknown etiology having in common multiple organ microvascular injury, platelet consumption and intravascular red blood cell and platelet destruction. The diagnosis is dependent on the triad of thrombocytopenia, hemolytic anemia and variable neurological disturbances. Fever and renal dysfunction may be evident. Treatment response to a variety of modalities has generally been poor. Partial plasma exchange to remove the adverse substances, replacing with fresh frozen plasma has produced promising results. In cases where plasma exchange was used early in the course of the disease, relief of neurological symptoms has been rapid and dramatic with or without other therapy. Treatment is continued until the patient's platelet count returns to normal and neurological symptoms clear, usually after a few days.

C. Antibody-Mediated Diseases
1. Myasthenia gravis[5] is considered to be an autoimmune disorder in which the body produces antibodies directed against acetylcholine receptor at the neuromuscular junction of striated muscles. Symptoms reflect progressive muscle weakness. When the respiratory and/or oropharyngeal muscles are severely affected, assisted respiratory ventilation and intensive care to manage secretions are necessary to sustain life. Diagnosis is dependent on compatible history and physical findings and it is confirmed by improved muscle function in response to administration of a cholinergic drug. When a patient experiences a myasthenic crisis or becomes respirator dependent, plasmapheresis to reduce the circulating level of antibody may be life saving. However, other treatment modalities are required to sustain the improvement. Fluid, electrolytes and plasma proteins should be re-

placed appropriately for each patient. Plasmapheresis is continued until response to other therapy becomes apparent.

2. Glomerulonephritis and pulmonary hemorrhage characteristic of Goodpasture's Syndrome[6] are autoimmune mediated symptoms reflecting injury to basement membranes by antibodies specifically directed against them. The objective of plasmapheresis is reduction of circulating antibody. When used in conjunction with other therapeutic modalities, short term relief of symptoms is reported. Duration of treatment and fluid replacement are dependent on the patient's needs and response to treatment.

D. Thyrotoxicosis[7]
Removal of naturally occurring slowly degraded protein bound substances such as thyroid hormones in patients with thyrotoxicosis is a further application producing a good, though usually temporary, medical result.

Removal of damaging antibodies or immune complexes in many other immune mediated diseases results in a variable but often favorable clinical response when other therapy has failed. Some conditions considered amenable to plasmapheresis include autoimmune hemolytic anemia, post transfusion purpura, factor VIII inhibitors, rapidly progressive glomerulonephritis, rheumatoid arthritis and systemic lupus erythematosis.[8]

Others in which plasmapheresis is of questionable efficacy include pemphigus vulgaris, asthma, insulin resistant diabetes, Crohn's disease, Reye's Syndrome and hepatic coma.

II. Cytapheresis: The major application (Table II) for cytapheresis is the removal of abnormal blood cells. In leukemic patients with a very high white cell count[9] or in patients with thrombocytosis[10] cell depletion can provide immediate relief of life threatening crises in a fashion analogous to plasmapheresis in the hyperviscosity syndrome. Removal of the leukemic cells or platelets improves blood flow. Cell depletion may require fluid replacement depending on volume removed.

TABLE II
DISEASES TREATABLE BY CYTAPHERESIS

Acute leukemia, blast crisis
Chronic leukemia
Thrombocytosis
Sickle cell anemia
Thalassemia major

Hemaglobinopathies with attendant red blood cell abnormalities lend themselves to hemolysis, stasis and anemia contributing to tissue hypoxia,

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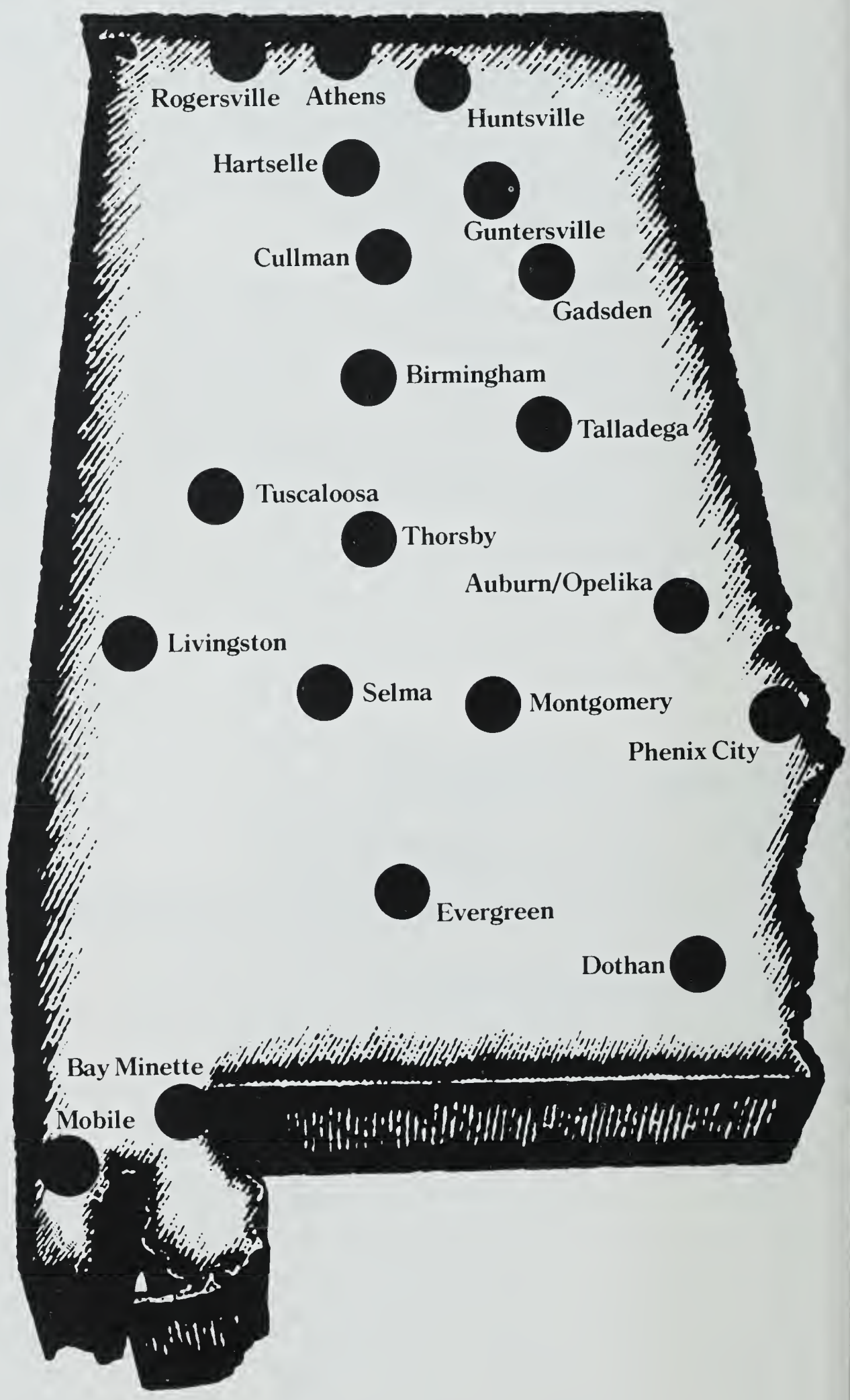
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congestive heart failure and renal infections. Anemia and episodic refractory crises in sickle cell disease[11] can be managed effectively by erythrocytapheresis and replacement with normal red blood cells. Red cell exchange has enabled women with sickle cell disease to carry pregnancies to term who were unsuccessful prior to availability of red cell exchange. Children with Thalassemia major[12] die from unremitting anemia if not transfused and from complications of iron overload if transfused. Red cell exchange, using normal donor blood, allows reasonable control of both problems as bone marrow is suppressed.

Clinical Constraints

Potential for abuse of therapeutic apheresis exists if one tries to use it as a ''cure all'' or indiscriminate ''last resort'' therapy. Used with reasoned care, and controlled where possible, the clinical applications can be further delineated and expanded. Experimental work currently holds promise of selective absorption of harmful antibodies, proteins and blocking substances from apheresed blood. This will allow return to the patient of cleansed cellular and fluid components, thus, alleviating the need for plasma or fluid replacement. Therapeutic apheresis has been used to treat many serious diseases without reasonable justification nor with appropriate control situations. The results have been variable, usually disappointing and treatment may even have contributed to disease progression, introducing further complications related to this therapy.

Therapeutic apheresis is not a completely benign procedure. Since one is generally treating patients with life threatening or rapidly progressive diseases not responsive to conventional treatment, complicating problems may be multiple. Vascular access may be virtually non-existent requiring placement of central venous catheters or surgical shunts. Comprehensive nursing care is essential during and after apheresis for early recognition and management of potential complications. Minor reactions may develop in as many as 10% of patients but these are readily controlled. Some reac-

TABLE III
PROBLEMS ASSOCIATED WITH APHERESIS

Citrate toxicity
Hypotension
Hypovolemia
Hypokalemia
Hypocalcemia
Hypogammaglobulinemia
Hypoalbuminemia
Reduce therapeutic drug level
Cardiac arrhythmias
Hemorrhage
Transfusion associated hepatitis

In 1977, when the Veterans Administration compared Step-2 regimens in 450 mild hypertensive patients, which regimen was proven most effective?[1]





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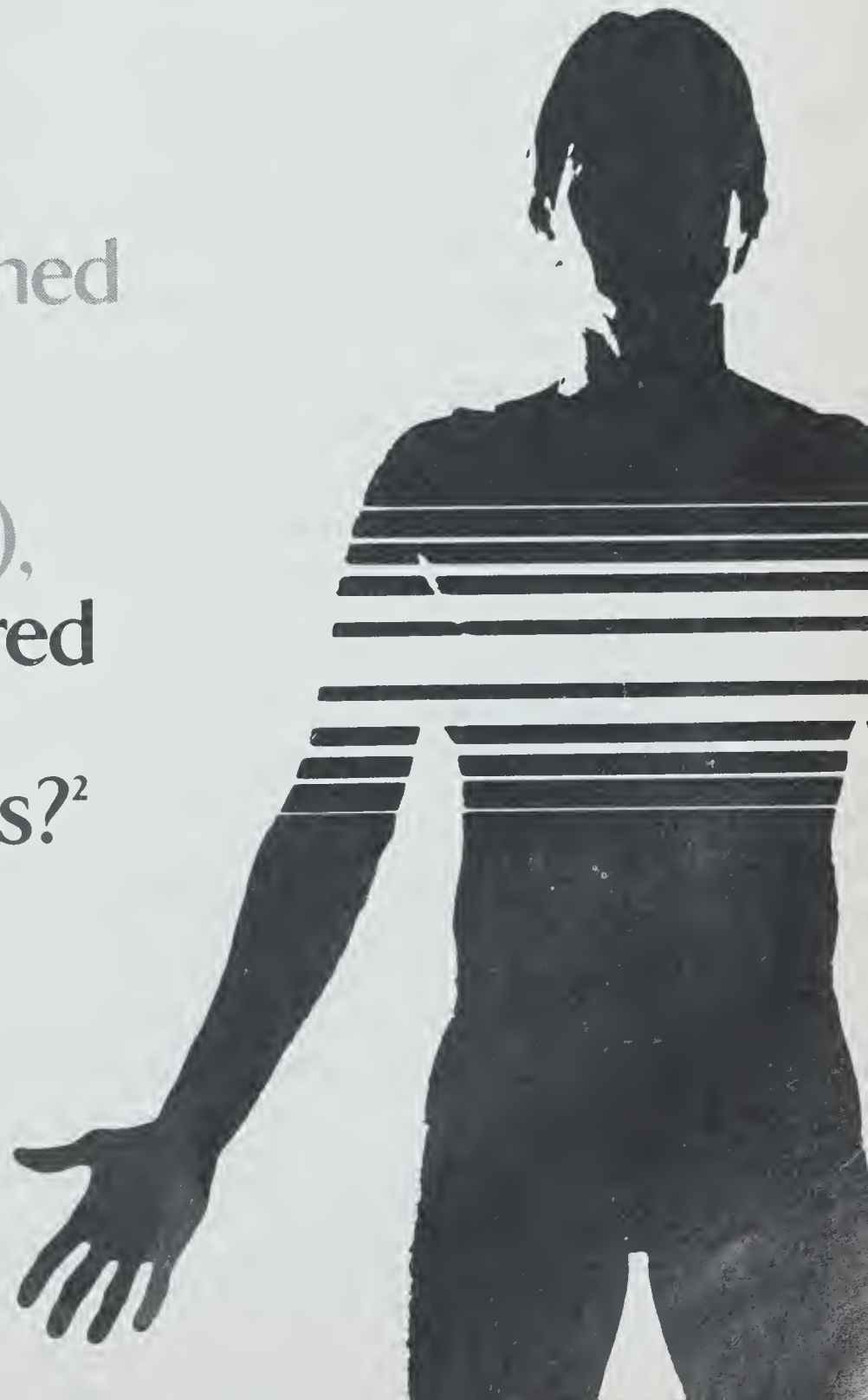
tions (Table III) are hypotension, citrate toxicity, chilling, abdominal cramps, hypovolemia, electrolyte depletion, cardiac arrhythmias, infections and hemorrhage. Laboratory values for electrolytes, hematology, and coagulation factors are monitored before, during and after the procedure. In twenty years only five reported deaths worldwide have occurred due to and during apheresis. Two deaths were due to acute cardiac complications and the others were of unknown mechanisms. This record reflects care in patient selection and in application of this treatment modality, diligent monitoring throughout treatment and frequent assessment of efficacy. Some patients still die of their disease despite treatment efforts. One must accept the fact that use of blood components for replacement carries the risk of transfusion associated hepatitis. Thus, blood components should be used as conservatively as is appropriate for good medical management. When clinically available, techniques for absorption of adverse substances will allow the patient's own cleansed plasma to be returned, thus, reducing the hepatitis risk.

Therapeutic apheresis units have been established at both the University of South Alabama Medical Center and the University of Alabama at Birmingham Medical Center to provide this treatment modality for those patients who can benefit. It will be available to patients in South Alabama by referral when consultation confirms the indication for therapeutic apheresis. To meet the expanding needs of the region, the Gulf Coast Regional Blood Service of the American Red Cross is currently establishing a donor apheresis center to provide single donor platelet and granulocyte concentrates. ⊡

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In 1979, when results were published for the five-year, 10,000-patient Hypertension Detection and Follow-up Program (HDFP study), which Step-2 regimen was preferred and was deemed effective without significant adverse effects?[2]



Histoplasmosis in Huntsville, Alabama

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Abstract

Histoplasmosis is a common and usually asymptomatic fungal infection acquired by inhalation of Histoplasma capsulatum spores. Common clinical presentations are acute pulmonary, chronic pulmonary and disseminated forms and less common syndromes include mediastinal fibrosis, pericarditis, osteomyelitis, meningitis and endocarditis. Diagnosis is made by histologic demonstration of the organism and confirmed by flourescent staining or culture of an appropriate specimen. Skin and serologic testing may suggest the diagnosis of histoplasmosis. Therapy of non-self-limited infections consists of amphotericin B and ketoconazole appears to be a promising new agent.

KEY WORDS:

histoplasmosis
amphotericin B
ketoconazole

Northern Alabama is an endemic location for the fungal infection, histoplasmosis, with some areas showing a greater than 80% incidence of infection as demonstrated by positive histoplasmin skin tests.[1] We in Huntsville have enjoyed a diverse clinical experience with histoplasmosis and it is our purpose through case reports to define the clinical spectrum, diagnosis and treatment of this disease.

Histoplasma capsulatum is a dimorphic fungus which is mycelial in the native state and a yeast residing in macrophages in the human host. The organism's presence and growth is enhanced by fowl excreta and bat guano and this explains the frequent association of histoplasmosis with exposure to starling or blackbird roosts, chicken houses and bat infested caves or trees.

Human infection with Histoplasma capsulatum ordinarily results from inhalation of airborne spores although cutaneous, conjugal and gastrointestinal portals of entry have been proposed. Growth of the organism occurs in the pulmonary parenchyma followed by lymphohematogenous dissemination to regional lymph nodes, liver, spleen and probably all other organs similar to primary infection with Mycobacterium tuberculosis.

After a period ranging from 7 to 18 days specific cell mediated immunity as manifested by a positive histoplasmin skin test develops and foci of infection begin to heal and eventually calcify. Organisms remaining in the center of the calcified areas are dormant but probably viable. This whole sequence of events is asymptomatic in the majority of people or accompanied by an acute self-limited influenza-like syndrome after particularly heavy exposure to histoplasma spores.

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Unlike infection with Mycobacterium tuberculosis specific immunity to Histoplasma capsulatum may wane with time thus producing recurrent primary or reinfection histoplasmosis.[1, 2]

Symptomatic infection is the exception rather than the rule and most importantly symptoms are dependent on the quantity of airborne innoculum and to a lesser extent on the degree of host hypersensitivity and age. Heavy exposure results in clinical disease only in people from a non-endemic area. For a given degree of exposure the young are more likely to develop symptomatic illness than adults. Most symptomatic infections in the normal host are pulmonary but in addition rare complications including pericarditis, mediastinal granuloma, mediastinal fibrosis, histoplasmomas, and bone infections can develop.[2]

In contrast, histoplasmosis in the abnormal host presents as an opportunistic infection in a disseminated form or a chronic pulmonary variety. Disseminated histoplasmosis develops in people with compromised cellular immunity such as the very young, in patients with malignancies or receiving corticosteroid or immunosuppressive therapy and in otherwise healthy people who have transiently depressed cellular immunity as seen during viral infections. Chronic pulmonary histoplasmosis almost exclusively appears in people with chronic obstructive pulmonary disease.[1]

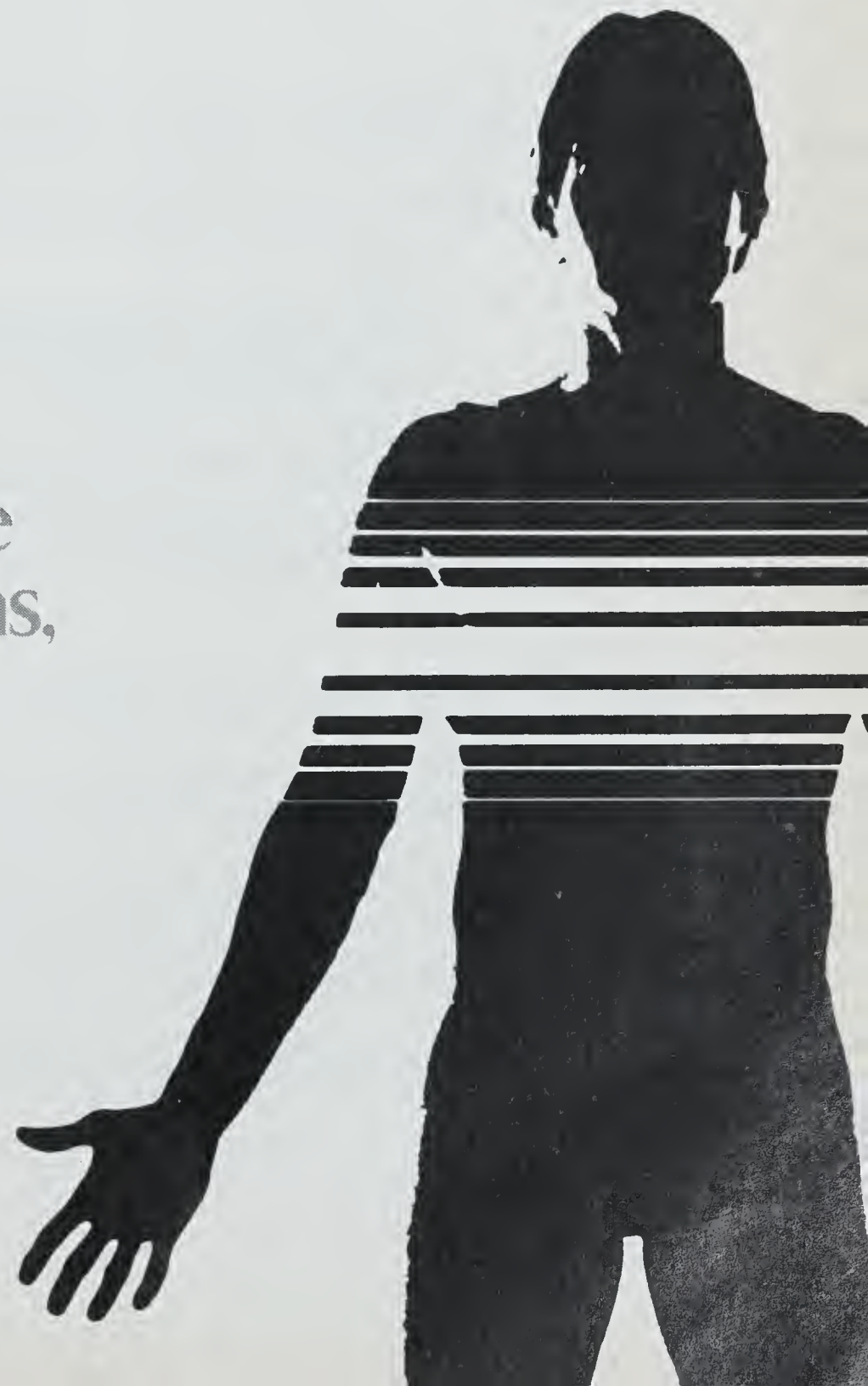
The following are case reports with comments that vividly describe the clinical spectrum, diagnosis and treatment of histoplasmosis based on our personal experience in Huntsville, Alabama.

Acute Pulmonary Histoplasmosis

Case No. 1

A 15-year-old male was admitted to the hospital with a one month history of weakness and weight loss and two week history of fever, cough and dyspnea. He had no exposure to chickens but many blackbirds nested near his home. Physical exam revealed an acutely dyspneic febrile male with diffuse rales in both lungs. His chest roentgenogram showed diffuse bilateral alveolar infiltrates and arterial blood gases revealed hypoxemia despite oxygen therapy consistent with the adult respiratory distress syndrome. Because the patient's cough was non-productive and because of impending respiratory failure, an open lung biopsy was performed. The lung tissue showed multiple granulomata and yeast organisms consistent with Histoplasma capsulatum and subsequent culture confirmed the diagnosis. The patient had a stormy postoperative course and required ventilatory support and pharmacologic doses of corticosteroids. In addition he received a total dose of 2.25 grams of amphotericin B. The patient gradually improved and was discharged after a 12 week hospital stay.

In 1980, when the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure published their recommendations, which Step-2 regimen best met their criteria for effectiveness, safety, simplicity of titration, convenience, and economy?[3]



Comment

Acute histoplasmosis can occur as an isolated case or in epidemic fashion when people disturb soil infested with fowl or bird excrement by cleaning a chicken house or bulldozing a starling roost. Although our patient did not participate in such an event he noticed blackbirds roosting around his house which undoubtedly served as the source of his infection. Most exposures to Histoplasma capsulatum result in subclinical infection, but with heavy innocula symptomatic infection results. Initial symptoms include an abrupt onset of malaise and headache followed by chills, fever and a non-productive cough. Occasionally erythema nodosum and erythema multiforme accompany an acute infection. Physical examination may reveal rales and enlargement of the liver and spleen. Chest roentgenograms may show pulmonary infiltrates which are either alveolar with hilar adenopathy and possibly pleural effusion or fine miliary nodulations. The course is almost invariably self-limited and benign. Rarely symptoms may persist for several weeks and exacerbate with activity. Even more rarely dissemination or acute respiratory failure may occur.[1] Our patient presented as the adult respiratory distress syndrome and required mechanical ventilation with positive end expiratory pressure, corticosteroids and antifungal agents similar to the case described by Wynne and Olsen.[3] The diagnosis of acute pulmonary histoplasmosis is primarily clinical but laboratory tests often show conversion of the histoplasmin skin test and elevation of the complement fixation titer. Occasionally lung biopsy is needed as in our case. Treatment ordinarily is not needed other than bedrest but with persistent symptomatic illness an abbreviated course of amphotericin B (800 to 1000 mg) is suggested.[4] We elected to treat with a full course of amphotericin B (2 to 3 gm) in our patient because we could not rule out the possibility of disseminated disease.

Chronic Pulmonary Histoplasmosis

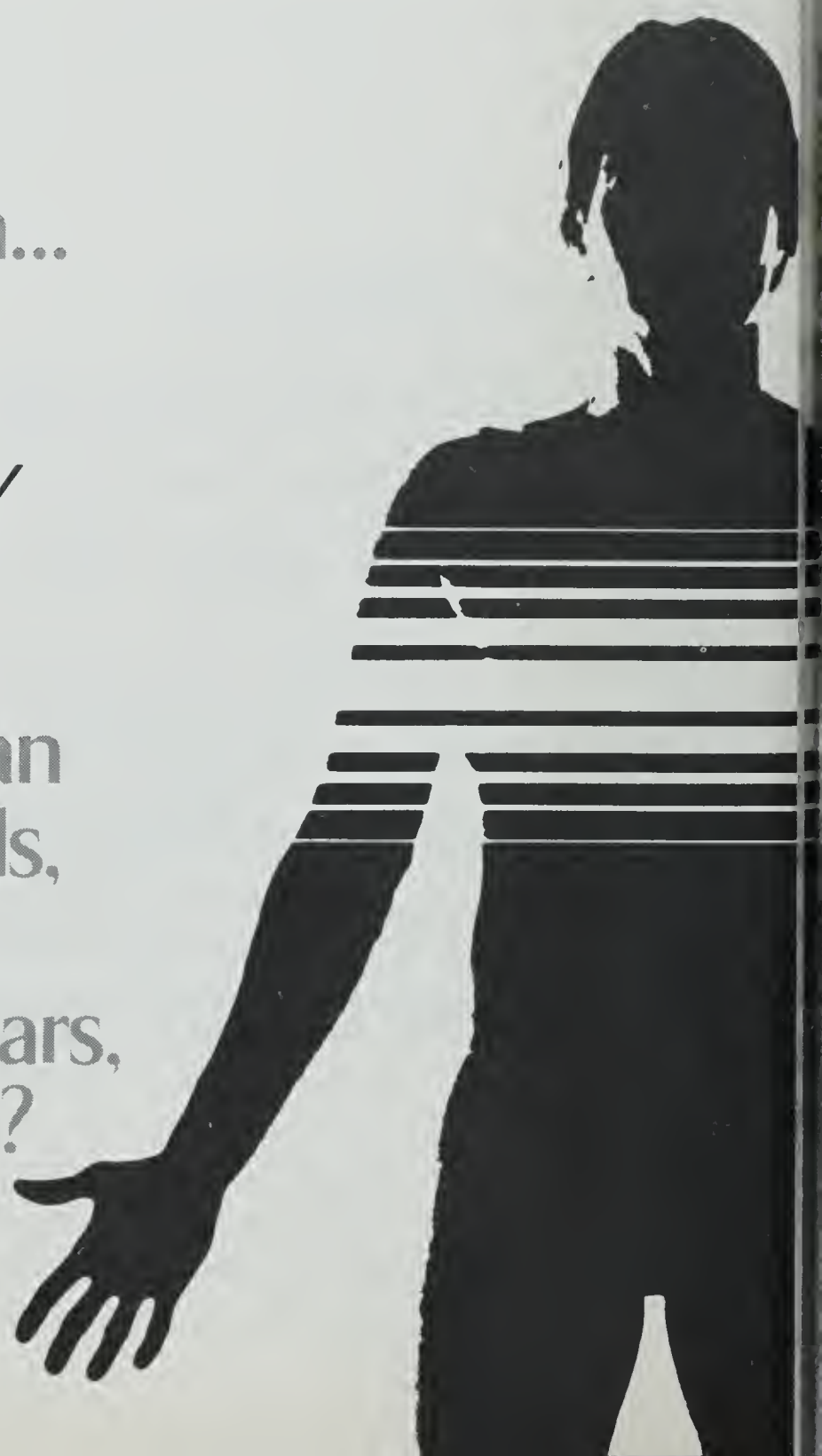
Case No. 2

A 57-year-old male was admitted to the hospital with a six month history of a 30 pound weight loss and a six week history of dyspnea on exertion and night sweats. The patient smoked 3 packs of cigarettes per day for 40 years and had prolonged exposure to silica and asbestos. Starlings were noted to roost beneath his roof. Physical exam revealed a chronically ill appearing male with diffuse rales and diminished breath sounds in both lungs. Chest roentgenogram showed extensive interstitial changes throughout the left lung which were more prominent in the upper lobe. Compensatory hyperinflation was noted in the right lung. Bronchoscopy with transbronchial lung biopsy of the left upper lobe re-

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vealed necrotizing granulomatous inflammation with numerous ferruginous bodies and an anthrocotic nodule containing birefringent small crystals consistent with silica. Cell block from the bronchial washing showed multiple yeast forms consistent with Histoplasma capsulatum and subsequent culture confirmed the diagnosis. Fungal serology for histoplasmosis was positive at 1/16 for the mycelial phase and at 1/32 for the yeast phase.

Comment

Chronic pulmonary histoplasmosis is an opportunistic infection which usually occurs in patients with emphysema. An early form of the infection (early chronic pulmonary histoplasmosis) is characterized by a pneumonitis. The cavitary form of chronic pulmonary histoplasmosis radiographically may simulate pulmonary tuberculosis and is characterized by persistent thin or thick walled cavities which may be associated with nodular fibrosis in dependent portions of the lungs. Slow enlargement of the cavity occurs by continuing necrosis of adjacent lung and produces the so-called "marching cavity" with loss of pulmonary parenchyma at a rate of up to 1 to 2 cm. per year.[1]

Symptoms of early chronic pulmonary histoplasmosis include fever, possibly of acute onset, malaise, mild cough, night sweats and a characteristic deep aching chest pain. Weight loss is also frequently noted, but 20% of cases have no symptoms.[1]

Chronic cavitary pulmonary histoplasmosis usually occurs in men over 40 and also produces rather nonspecific symptoms. Cough with sputum production is somewhat more common than in the early type, and hemoptysis may occur. Weight loss, malaise and easy fatigue also are frequent symptoms.

Although the clinical and radiographic findings may suggest the diagnosis of chronic pulmonary histoplasmosis, confirmation requires growth of Histoplasma capsulatum from fungal culture of sputum, bronchial washings or lung tissue.

Treatment of early chronic pulmonary histoplasmosis usually requires no anti-fungal agent but limitation of activity is felt to decrease the chance of developing persistent cavitation. In cavitary histoplasmosis, surgical resection of a single cavitary lesion is effective if pulmonary function permits. Persistent cavities which cannot be resected are treated with a full 2-2.5 gm course of amphotericin B. Some authors suggest that thin walled cavities may be watched for the development of complications.

Disseminated Histoplasmosis

Case No. 3

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weakness and weight loss and a two month history of a non-healing oral ulcer. The patient raised chickens and noticed many blackbirds and starlings on his farm. A biopsy of the ulcer performed in the office of the patient's dentist revealed granulomas and yeast organisms consistent with Histoplasma capsulatum. The patient was admitted to the hospital for initiation of amphotericin B therapy. Physical examination was unremarkable except for an oral ulcer 1 cm in diameter. Chest roentgenogram, complete blood count, and chemistry profile were normal. Amphotericin B therapy was initiated but because of renal toxicity the drug was discontinued. The patient was switched to ketoconazole, 400 mg daily, and showed healing of the ulcer with an increase in strength and weight. The patient is to receive a one year course of ketoconazole therapy along with follow-up to detect recurrence of histoplasmosis or the development of adrenal insufficiency.

Comment

Disseminated histoplasmosis refers to extrapulmonary invasion by the yeast phase of Histoplasma capsulatum of host mononuclear phagocytes. Although there is avid phagocytosis, intracellular killing of the yeast is deficient. Disseminated disease may arise from acute pulmonary histoplasmosis or from reactivation of a quiescent focus from a remote infection but never is associated with chronic pulmonary histoplasmosis. A defect in cell mediated immunity such as occurs with malignancies, immunosuppressive therapy or viral infections is thought to predispose to dissemination, although in most cases the defect is not readily apparent. There is a striking susceptibility of young infants to the disease but it occurs in all ages and in both sexes. In children disseminated histoplasmosis most commonly presents with fever, malaise, cough, weight loss and gastrointestinal symptoms and rapidly progresses to debility and death. Hepatosplenomegaly is almost invariably found on physical examination and bone marrow depression manifested by anemia, leukopenia and thrombocytopenia occurs in nearly all patients.

In contrast, the disease in adults is characterized by chronic or intermittent constitutional symptoms such as fever, weight loss and fatigue. An oropharyngeal ulcer causing pain, hoarseness or odynophagia is the hallmark of disseminated disease in adults and hematologic changes are uncommon and clinically insignificant. Our patient was asymptomatic except for a non-healing oral ulcer which on biopsy proved to be due to Histoplasma capsulatum.

The diagnosis of disseminated histoplasmosis depends on either the histologic demonstration of compatible intracellular organisms at extrapulmonary sites or a positive culture of blood or viable tissue. Tissue for diagnosis can be obtained by bone marrow biopsy, liver biopsy, lumbar puncture or biopsy of oropharyngeal ulcers. Serologic and skin tests cannot be used to establish or refute the diagnosis of disseminated disease.

The treatment of disseminated histoplasmosis requires full dose amphotericin B therapy. A total dose of 2-2.5 grams or daily administration of a dose of amphotericin B which gives a blood level twice th

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minimal inhibitory concentration of Histoplasma capsulatum over a period of 10 weeks is given. Recently a new antifungal agent, ketoconazole, has demonstrated efficacy when given at a dose of 200 to 400 mg daily for 1 year.[9] Surgery is indicated for focal lesions such as intestinal perforation or endocarditis and adrenocorticoid replacement is mandatory for cases of adrenal gland destruction.

Histoplasmosis of Bone

Case No. 4

A 66-year-old male was admitted to the hospital with a 2 to 3 month history of soreness and swelling in his left elbow made worse with exertion. He had no history of trauma to this area and denies any constitutional symptoms. He lived in the Huntsville area for the past 50 years. Physical exam was normal except for tenderness and swelling in the left distal humerus. There was no lymphadenopathy, hepatosplenomegaly or oral lesions. Radiographs of the left humerus revealed a 1 cm lytic lesion in the medullary portion of the lower humerus. An open biopsy of the lesion revealed a large granulomatous focus with areas of necrosis. Numerous histocytes were present with clumps of oval, budding 2-3 micron diameter yeast like organisms subsequently identified as Histoplasma capsulatum.

Comment

Focal lesions of bone are a rare manifestation of histoplasmosis. Other reported cases have included destruction of a knee joint with involvement of adjacent bone and infection of a carpal joint with lesions in the triquetrum. This case has been reported previously and represents a variation of disseminated histoplasmosis with a striking tendency to focal destructive lesions. Other lesions include intestinal ulceration and perforation, adrenal gland destruction resulting in Addison's disease, endocarditis, meningitis and cerebritis. Therapy with amphotericin B is recommended for this as well as for all forms of disseminated disease.[10]

Mediastinal Fibrosis

Case No. 5

A 35-year-old male was admitted to the hospital with a six year history of progressive dyspnea on exertion and wheezing without seasonal variation. There was no history of atopia or cigarette use. Physical exam was normal except for wheezing over the trachea and left lower lobe. Serial chest roentgenograms over the past 7 years showed progressive volume loss in the left lower lobe and a left hilar mass. Tomograms of the left mainstem bronchus revealed abrupt occlusion by a mass-like process. Bronchoscopy revealed obstruction of the left mainstem bronchus at its bifurcation by a smooth reddened mucosal abnormality. Brushings and biopsies of this area were negative for neoplasia and granulomata. At thoracotomy the patient had a large obstructing mass in the left mediastinum causing compression of the left mainstem bronchus and a pneumonectomy was performed. The mediastinal mass histologically consisted of granulomas with caseous necrosis surrounded by exuberant fibrosis. Also seen were small yeast consistent with Histoplasma capsulatum and confirmed by immunofluorescent staining.

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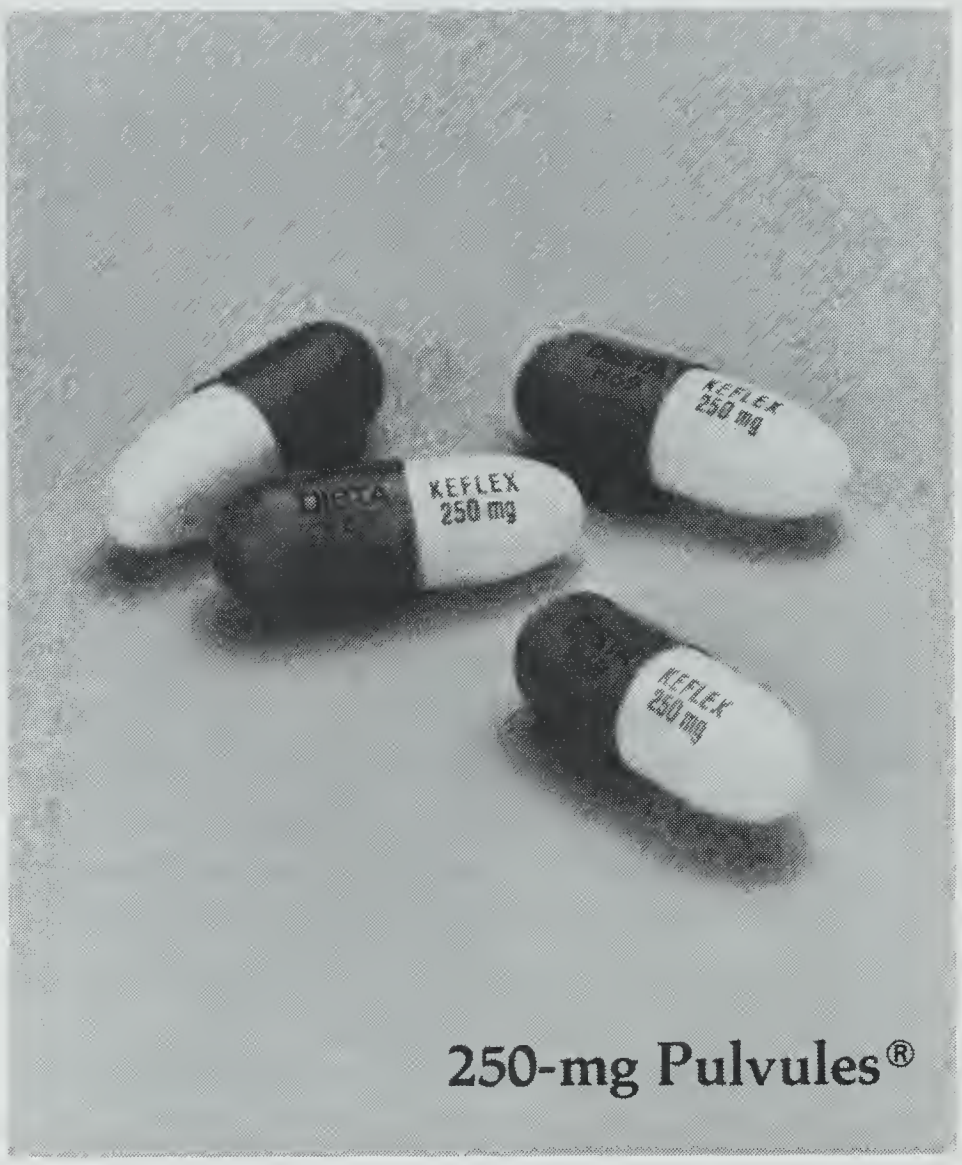
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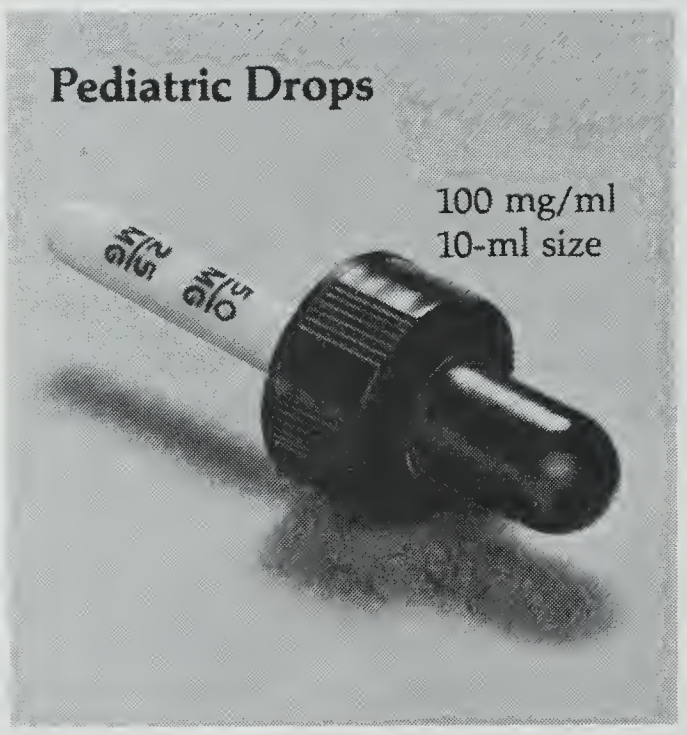
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Cultures for yeast were negative.

Comment

Mediastinum fibrosis is rare but well described complication of histoplasmosis.[1] It occurs in the hypersensitive host secondary to excessive encapulating fibrosis developing around a hilar or mediastinal lymph node involved during the primary infection with histoplasmosis.[1] The location of the involved lymph node determines the ensuing complication. In the right paratracheal area, superior vena cava obstruction develops whereas subcarinal involvement obstructs the mainstem bronchi or the pulmonary veins. In our patient, the left hilar nodes were involved causing obstruction of the left mainstem bronchus. Because the problem is one of excessive fibrosis rather than active infection, there seems little reason to administer antifungal medication to these patients.[11]

Histoplasma Pericarditis

Case No. 6

A 29-year-old male was admitted to the hospital with a 3 day history of pleuritic chest pain. A diagnosis of idiopathic pericarditis was made and the patient was discharged on indomethacin and prednisone. He was readmitted with a 3 week history of dyspnea on exertion and pleuritic chest pain. Physical examination revealed signs of pericardial tamponade including paradoxical pulse, distant heart tones and Kussmaul's sign. An enlarged cardiac silhouette was seen on chest roentgenogram and an echocardiogram disclosed a large pericardial effusion. Exploratory thoracotomy with placement of an anterior pericardial window was performed. Pericardial biopsy demonstrated granulomas and multiple yeast identified as Histoplasma was positive in a titer of 1:32. The patient had an uneventful recovery and received no antifungal therapy. Follow-up at 6 months revealed no evidence of recurrent effusion.

Comment

H. capsulatum pericarditis primarily occurs in patients less than 30 years old who previously had been in good health. There is a history of an antecedent upper respiratory tract infection followed by fever, cough and generalized malise which are present for several weeks prior to the onset of chest pain. Fever, tachycardia and a pericardial friction rub are commonly observed and evidence of pericardial tamponade is found in about half the patients while almost all have an elevated sed rate. Chest roentgenograms usually show an enlarged cardiac silhouette and a concomitant pulmonary lesion or mediastinal lymphadenopathy. Pleural effusion which is uncommon in uncomplicated histoplasmosis can be seen in 40-50% of patients.

Pericarditis is observed during the acute phase of infection and is thought to occur either from direct extension of a caseous lymph node into the pericardial sac or as a response to inflammation in a contiguous lymph node.[12] Attempts to isolate the organism in culture are usually unsuccessful and the diagnosis is made either by indentification of the organisms on a biopsy specimen or by demonstrating a 4-fold or greater rise in the complement fixation antibody titer to the histoplasmin antigen. Histoplasmin skin tests are usually positive.

Therapy is usually symptomatic and there is no evidence that amphotericin B will alter the course of the disease in most patients. Almost all recover although convalescence may be protracted and pericardiocentesis or pericardiectomy may be required for relief of tamponade as in the case of our patient. Relapses may occur but they are usually mild and do not require hospitalization.

Constriction develops in less than 10% of the cases and there may be a theoretical advantage to using a short course of amphotericin B in those patients with protracted illness to prevent this complication.[12]

In summary, we have described the clinical spectrum, diagnosis and treatment of histoplasmosis based on our experience with this infection. Histoplasmosis is a common and usually asymptomatic fungal infection acquired by inhalation of Histoplasma capsulatum spores. Common clinical presentations are acute pulmonary, chronic pulmonary and disseminated forms and less common syndromes include mediastinal fibrosis, pericarditis, osteomyelitis, meningitis and endocarditis. Diagnosis is made by histologic demonstration of the organism and confirmed by fluorescent staining or culture of an appropriate specimen. Skin and serologic testing may suggest the diagnosis of histoplasmosis. Therapy of non-self-limited infections consists of amphotericin B and ketoconazole appears to be a promising new agent. ⊡

Acknowledgement

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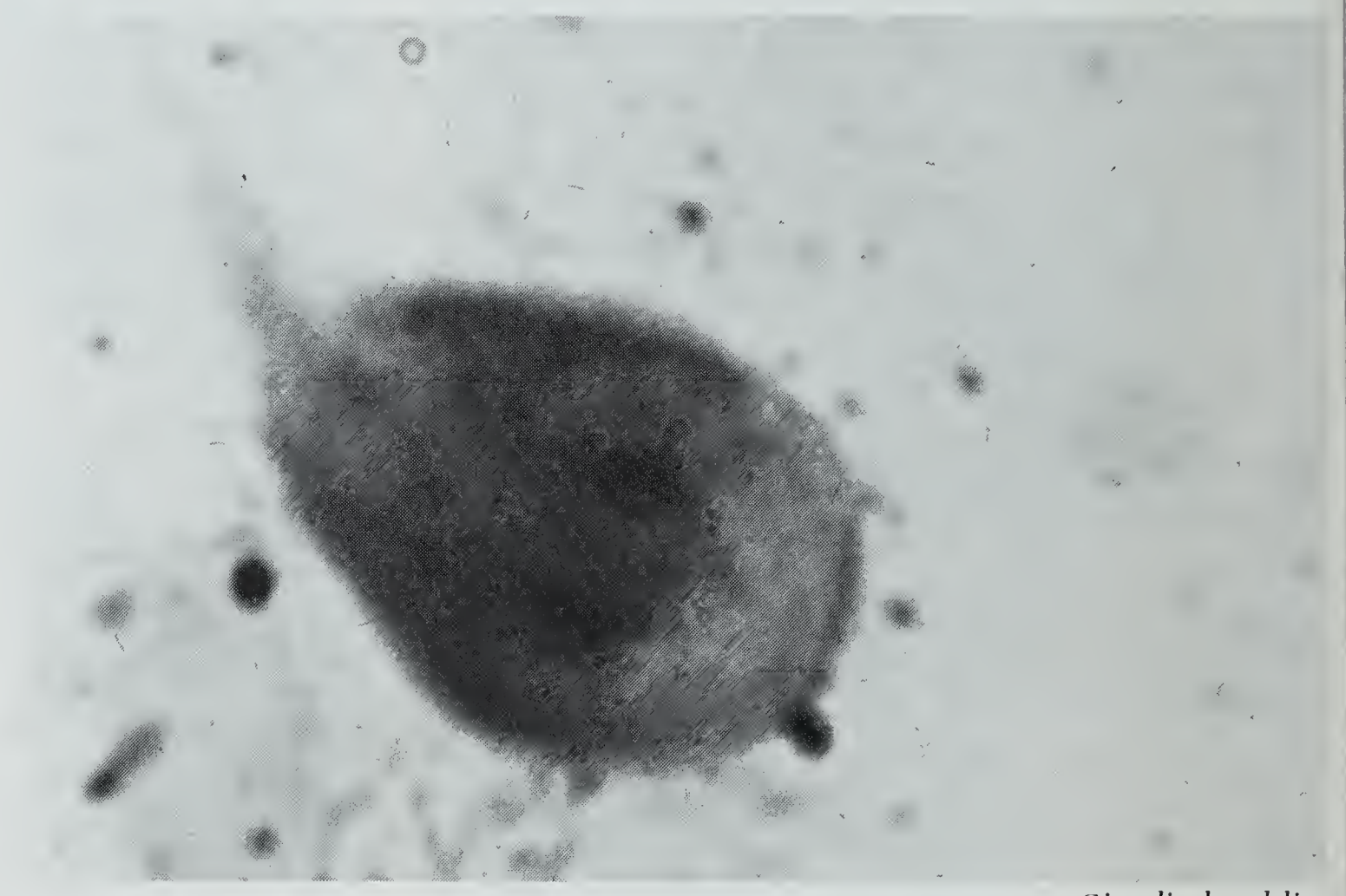
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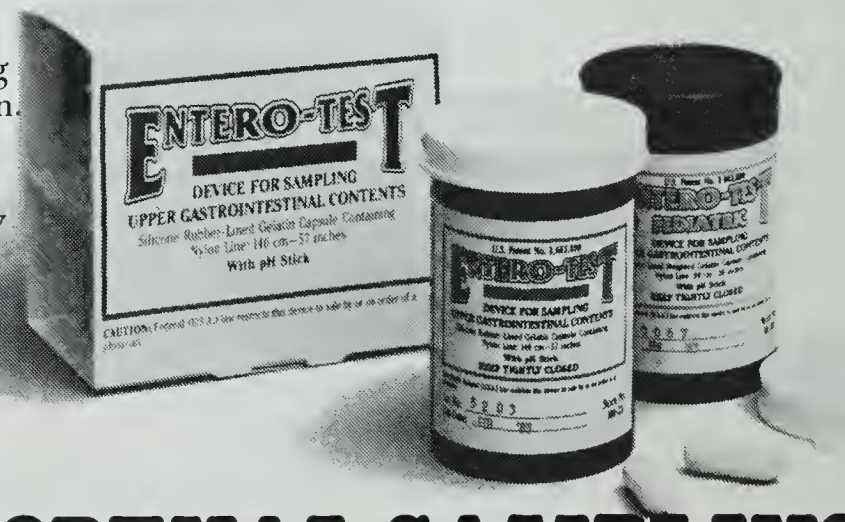


Giardia lamblia

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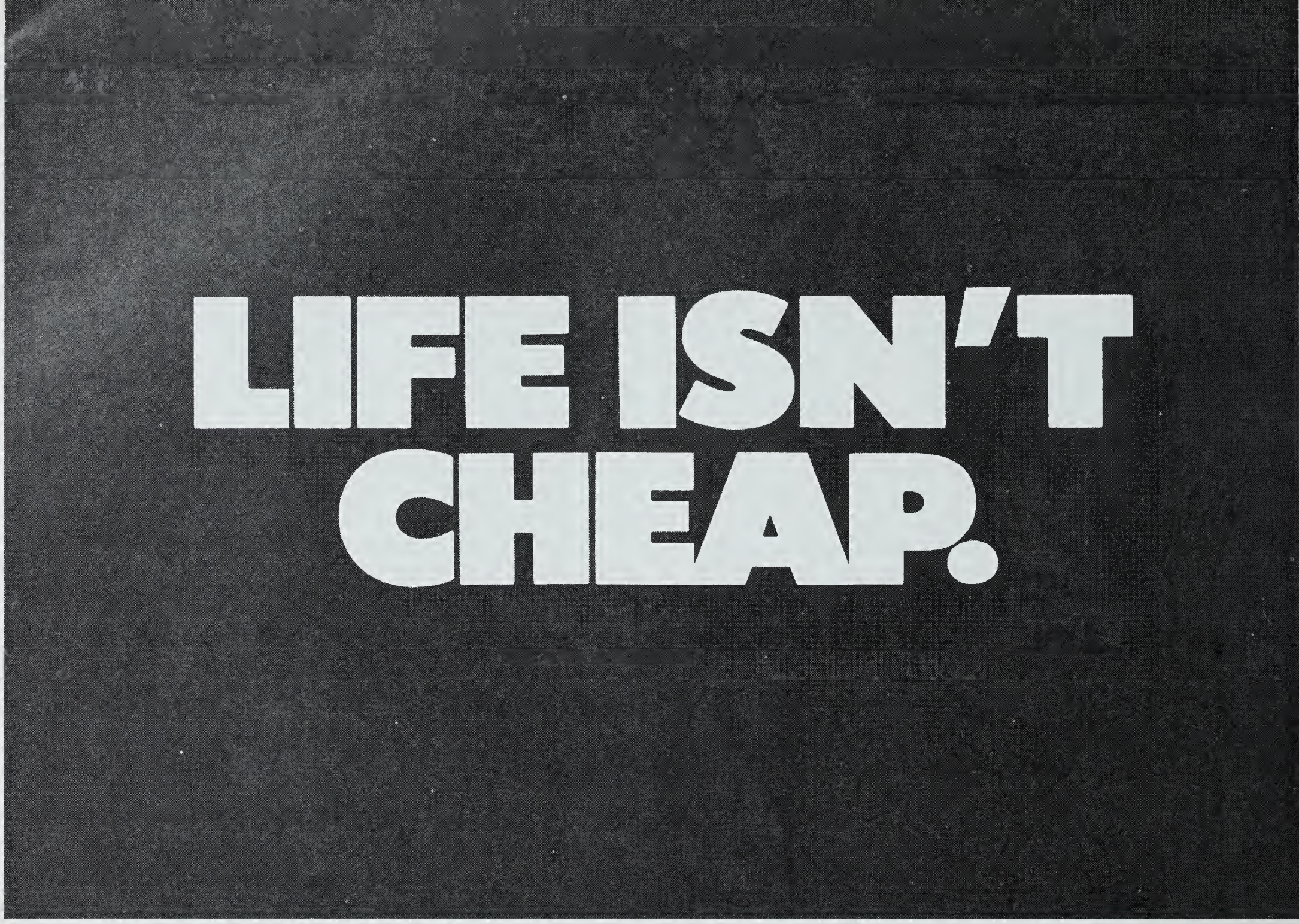
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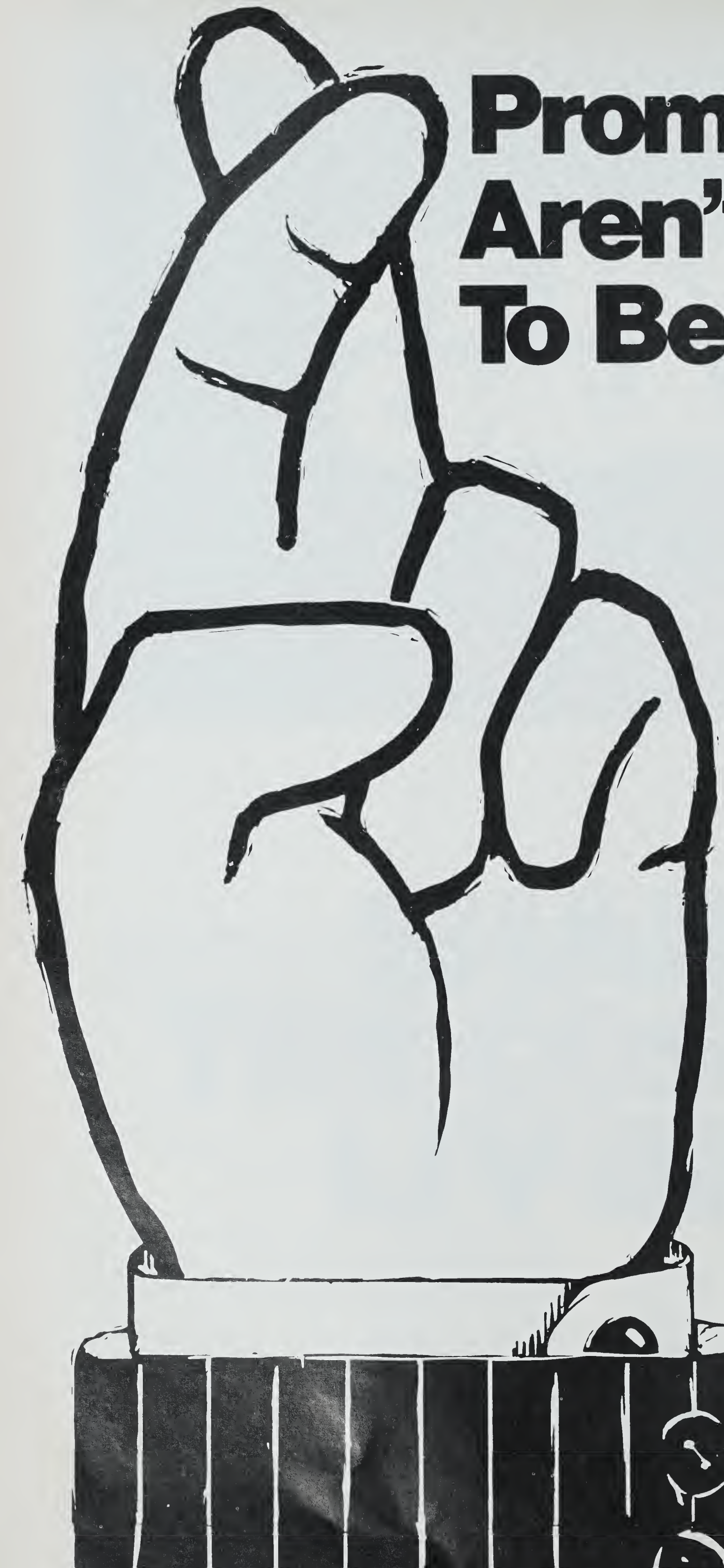
"It is possible and feasible for many people, who now live a crippled life, to regain a measure of health. Transplantation of kidneys, corneas and even hearts, from the dead, to the injured living, is now a surgical and practical reality. Just as the mythological Phoenix bird arose from the ashes of tragedy and death, so can humans be given a second chance at life. The Phoenix has become the symbol of organ donor awareness projects, with the idea originating in the Kentucky State Auxiliary.

"For this to take place, however, we need a public that is aware of the facts of transplant surgery. The reality that one might someday be a potential donor is a sobering and undesired thought. However, the decision to become a donor can be made while in good health. It should be made, with full consideration of the facts and then discussed with family members and friends. Then, when death occurs, this gift of life can be made by the survivors, joyfully and willingly.

"Therefore, A-MASA plans to encourage county auxiliaries to find at least one person in their memberships, that are willing to learn how to provide awareness talks on this subject. These auxilians would be given outlined talks, general information that would cover answers to anticipated questions, materials to distribute and up to date information on organ transplantation in Alabama. It is hoped that they then, would actively seek opportunities to speak to civic organizations, youth groups or any gathering that would like to learn about the facts of organ transplantation."

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VOL. 52, NO. 2, AUGUST, 1982



DOCTOR HOLLEY'S

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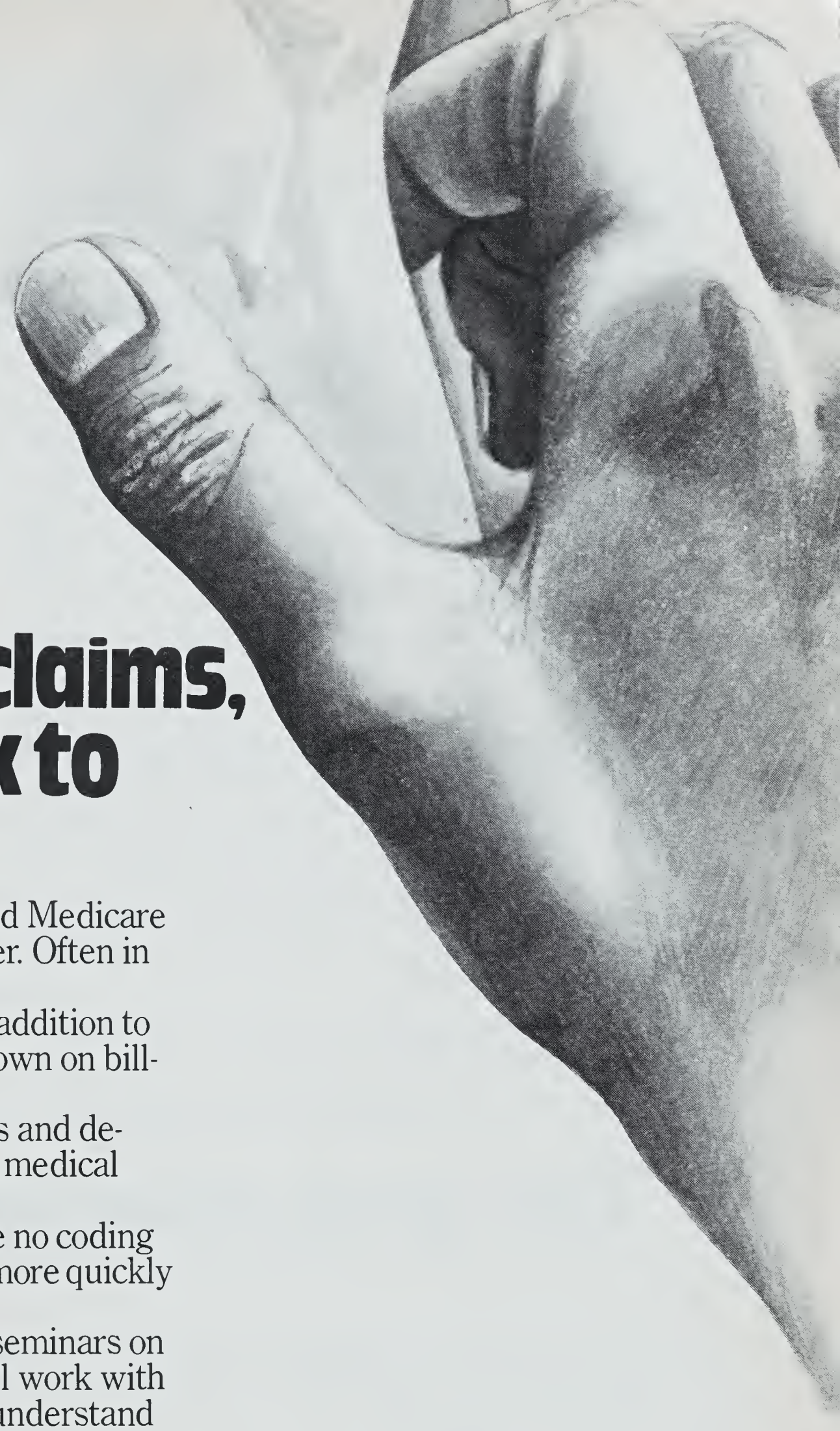
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Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity.

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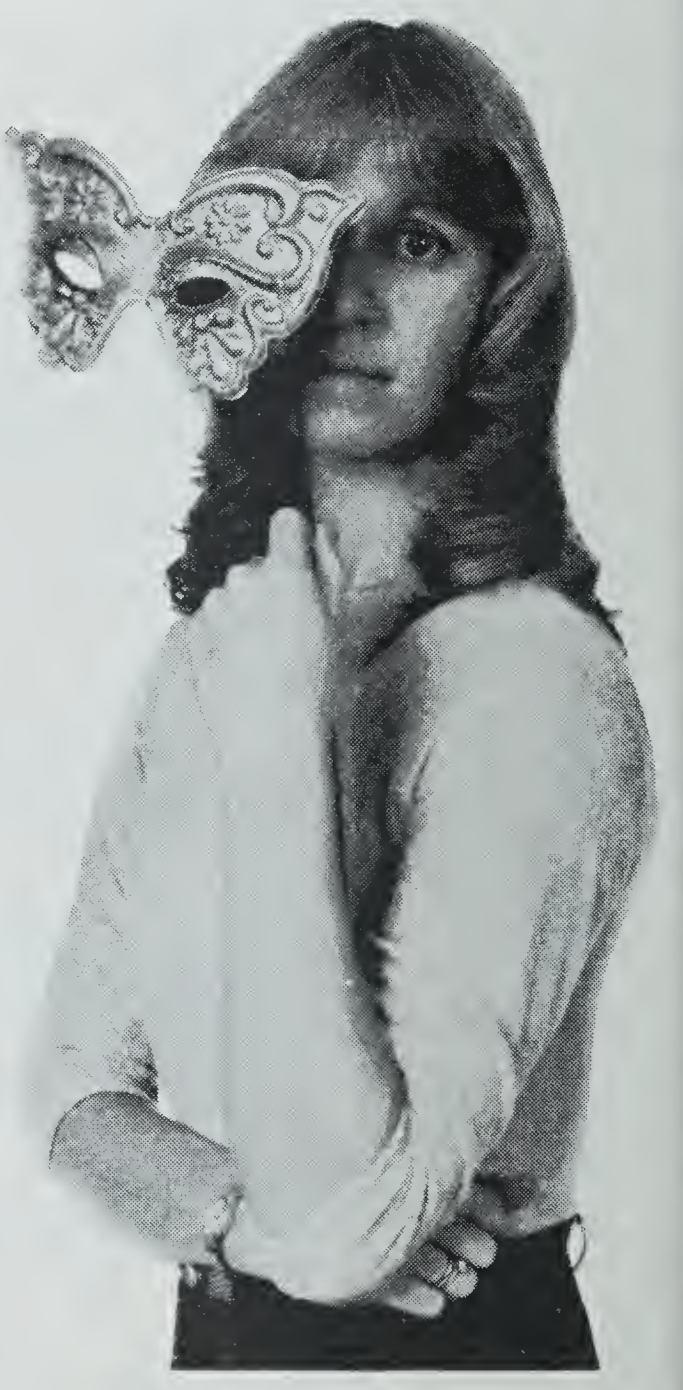
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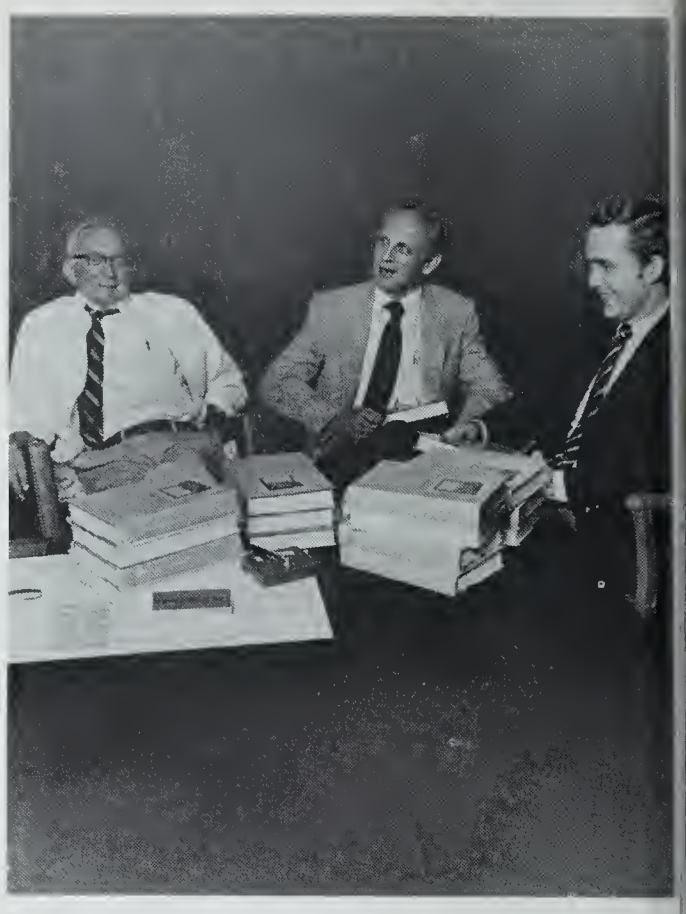
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EXECUTIVE DIRECTOR

DOCTOR HOLLEY'S MIRACLE TONIC



On this month's cover, Howard L. Holley, M.D. (left), UAB's beloved physician/teacher, is sharing the joy of birth of his book, *A History of Medicine in Alabama,** with (center) Carl A. Grote, Jr., M.D., Chairman of the Board of Censors, and Ronald E. Henderson, M.D., MASA President.

It took Dr. Holley 14 long years of researching, writing and rewriting to complete his study of the rich history of medicine in this state. In many ways, it is an even larger history of American medicine, and indeed, world medicine.

Somewhere in the period between the arrival of the French ship *Pelican* at Fort Louis de la Mobile in 1704, back when our seaport was part of French Louisiana, and the 1930s, with the introduction of modern drugs, medicine came of age.

Dr. Holley's chronicle of that happening in Alabama covers the battles for professional status, the endless fights against quackery, the terrible epidemics when physicians of the day could only guess what caused yellow fever and the rest; the uphill struggle for medical education, chaos before the Flexner Report of 1910; the evolution of the hospital from a charity ward for the poor to the modern high-tech institution of today; the birth and evolution of MASA from humble, fragile origins; the spawning of the public health idea under the same man who had made the Association work after a misfire, Dr. Jerome Cochran; the pioneering treatment of mental illness in this state; the legislative battles . . . All of this calvacade of Alabama medicine, presented by Dr. Holley, is a stirring central theme in our emergence as a state carved out of the southern wilderness.

Rogues and rascals are here, along with heroes and physicians of selfless dedication and commitment to suffering humanity. You'll find the Thomsonians, or steam doctors, along with brilliant visionaries like Doctors Cochran, Mabry, Nott, Fearn.

You will suffer with them, pull for them, wishing against wish that you would tell the beleaguered physicians of the 19th Century that all their theories about the fevers were false, guiding them in the direction of modern science from your vantage point of a century later. But you can't, so you despair with them as the mass graves receive the victims of our epidemics, too numerous for individual buria

It has been a long and glorious struggle, one tha will never end. Dr. Holley, molded of the same cla as the medical forebears whose story he had n choice but to tell, has enriched the profession. He are your taproots, your heritage. And mine to although I am no physician. For the story Alabama medicine is intricately interwoven wit the story of my ancestors, and everyone's. It is story that belongs to all of us.

We took some liberty with Dr. Holley's book o the cover by giving it the snake oil patent medicin treatment, but we took our cue and our license fro the Good Doctor's legendary good humor, we known to that half of the state's physicians who wer once his students.

Dr. Holley was entertaining Dr. Henderson an Dr. Grote with one of his unpublished historic anecdotes when the cover picture was made. And h is a man of infinite jest, just as he is a deeply carin physician, dedicated teacher and, now, medic historian.

With his own roots deep in his native land o Alabama, he enjoins all of us, in his Epilogue, t remember the words of another Southerner William Faulkner, who wrote:

"The past isn't dead. It's not even past."

Dr. Holley adds:

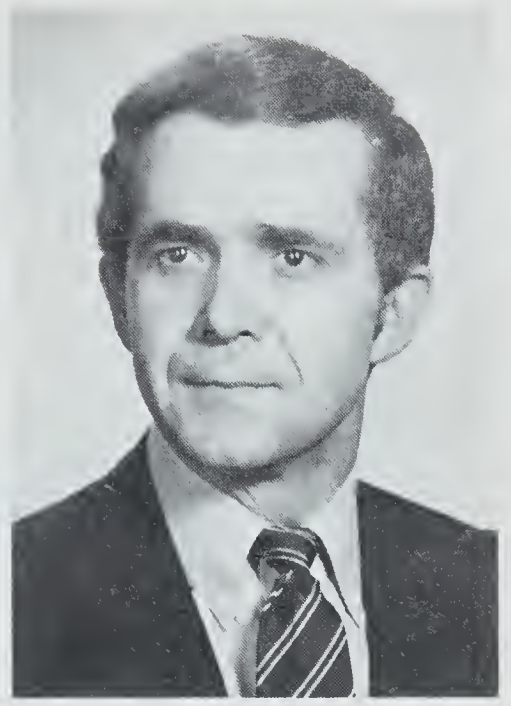
"For medical students and physicians, and fo those in related fields, the study of the history of profession, dealing as it does with all aspects o human culture, affords one of the soundest bases fo forming and relating ideas. It is also an excellen counteraction to the daily grind and to the menta staleness that can result from narrow specializa tion."

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Lon

**The History of Medicine in Alabama*, Howard L. Holley, M.D., the University o Alabama School of Medicine/The University of Alabama Press, Birmingham and Tuscaloosa, 1982, 418 pp., $35.

PRESIDENT'S PAGE



Ronald E. Henderson, M.D.
President, MASA

The Long Shadow of the Courtroom

On the rapidly changing landscape of medical practice, one of the features continuing to cause many problems is professional liability. In this era of consumerism, professionals are not alone in suffering adverse effects of a public with high expectations and the apparent unwillingness to accept anything other than a perfect product or outcome. If perfection is not delivered, someone else is responsible and must pay.

The system by which lawyers are reimbursed (contingency arrangement by which the lawyer gets a percentage of the settlement or award, usually 50%) fuels the fire with an insatiable appetite. Most professional liability cases do not represent malpractice or negligence. Most represent maloccurrence, poor results or outcomes scientifically proven to be expected in a certain percentage of cases, even in the best of hands.

In Alabama, almost one-half of physicians have had a claim or suit filed against them in the past five years. Do one-half the physicians in our state practice substandard medicine? Absolutely not! However, in a state with no pretrial evaluations, many trivial cases are filed. Then the system takes over. Every plaintiff needs at least one lawyer (working on a contingency system, nothing risked, with the possibility of great gains) as does the defendant (this lawyer works by the hour with the clock running).*

"The system" thus pits lawyer against lawyer in the preparation of cases and in the courtroom. But we all know that both sides benefit in proportion to the activity. This has brought on an avalanche of nonmeritorious, baseless suits filed on speculation.

"The second crisis" appears to have already arrived. The situation in the 1980s will be different from that of 1974-75. Then all insurance carriers writing professional liability insurance left Alabama and we had to form our own physician-owned company, Mutual Assurance Society of Alabama, or go "naked." This time, due to the success of our "bedpan mutuals," insurance will be available if the physician can afford to pay the premiums.

Living in the most litigious society in the history of the world, we have had more medical liability suits filed in the past five years than the previous total of such suits filed in this country since its beginning. In addition, awards in professional liability cases against physicians have nearly tripled in size in the past few years. Jury awards and settlements are increasing in amount, with million-dollar sums becoming almost commonplace. The expense of defending cases is increasing at an alarming rate.

> In the United States, we have 20 times more lawyers per capita than England, 50 times more than Japan. In California alone in 1979, 7,000 attorneys were admitted to the bar, and the number has gone up each year since then.

continued on page 46

* A plaintiff lawyer went to heaven and was met by St. Peter at the gate. St. Peter said, "My, George, you're well preserved for a man of 142." George replied, "But St. Peter, I'm only 71." St. Peter looked confident when he said, "Oh, I'm sure you're 142. I have your time sheet."

Neonatal Mortality in Alabama 1970-1980

Robert L. Goldenberg, M.D.
Joan L. Humphrey, M.P.H., M.B.A.
Christiane B. Hale, Ph.D., M.P.H.
John B. Wayne, Ph.D.
Beverly W. Boyd, M.D.

More than two-thirds of all infant mortality occurs in the neonatal period, or through the first 27 days of life. In 1970, Alabama's neonatal mortality rate was 17 per 1,000 live births. By 1981, it had fallen to nearly 8 per 1,000 live births.[1, 2] To learn in which birthweight catagories the reduction in neonatal mortality occurred and to determine where further reductions may be possible, we performed an analysis of neonatal mortality in Alabama for the years 1970 through 1980.

For our analysis, we used computer tapes of the 1970 through 1980 birth and death certificates which were provided by the State Health Department. The death certificate, for each infant who died, was matched with the corresponding birth certificate. By using matched records, the substantial amount of information located on the birth certificate was available, including birthweight, gestational age, whether the infant was from a single or multiple pregnancy, and information about the mother such as her educational level, marital status, and the number of previous pregnancies.

We chose to look at neonatal mortality rather than infant mortality for several reasons. First, neonatal mortality virtually always occurs in a hospital. This data, therefore, tends to be more accurate. Second, much of the post-neonatal mortality, deaths occurring between 28 days and one year of age, is unrelated to and not influenced by improvements in medical care and is usually attributed to sudden infant death syndrome, congenital anomalies, or accidents.

Our data differ somewhat from the state vital statistics data in that we considered (1) only infants born weighing 500 grams or more, and (2) births which actually occurred within the state of Alabama. Vital statistics data include infants born outside the state to Alabama residents as well as all infants 20 weeks gestational age or more.

There are many observations which can be made from this analysis. Therefore, we are presenting only highlights related to neonatal mortality during this time period. For those wishing further information, the Bureau of Maternal and Child Health of the State Health Department and each of the state's regional perinatal centers have complete reports.[2]

From this report, it becomes relatively easy to identify those women who are likely to have an infant which will die within the first 28 days of life. Infants of non-white women have twice the neonatal mortality of infants of white women. Infants of single women have twice the neonatal mortality of infants of married women. Infants born to women having five or less prenatal visits have five times the neonatal mortality of infants born to women who have had six or more

From the Department of Obstetrics and Gynecology and the School of Public Health at the University of Alabama in Birmingham and the Bureau of Maternal and Child Health of the Alabama State Health Department.

Reprint Requests to: Robert L. Goldenberg, M.D., Department of Obstetrics and Gynecology, the University of Alabama in Birmingham, School of Medicine, University Station, Birmingham, Alabama 35294.

We wish to thank the staff of the Rust Computer Center for their assistance in data management and Kay Zarzour for her help in manuscript preparation.

prenatal visits. Infants born to women less than 20 or more than 35 years of age have a higher neonatal mortality rate than those born to women 20 to 35 years of age. Women with less than a high school education have infants with higher neonatal mortality rates than women who have completed high school. Infants of multiple pregnancies can expect to die at a rate seven times greater than that for infants born from singleton pregnancies.

Without a doubt, the one factor which contributes most to neonatal mortality is the birthweight of the baby.[3] Therefore, infants were grouped into six birthweight categories for comparison. Table I shows the percent of infants born in Alabama in the years 1976-1980 which are found in these six birthweight groups. Table 1 also shows the percent of all the neonatal deaths which occurred to infants born in each of those birthweight groups. The neonatal mortality rate for each birthweight group is shown as well. During the period from 1976 to 1980, eight percent of the babies born in Alabama weighed less than 2,500 grams. Seventy percent of the neonatal mortality occurred in this weight group.

Table 2 shows the number of deaths and the neonatal mortality rate for each of the birthweight groups for the years 1970-1971 and 1979-1980. Table 2 also shows the percent of the reduction in neonatal mortality which occurred within each birthweight group during this period of time. From these figures, it can be seen that 79% of the improvement in neonatal mortality was seen in infants born weighing less than 2,500 grams. Conversely only 21% of the improvement in neonatal mortality was found in infants born weighing 2,500 grams or more.

Table 3 shows the percent of the state's total infants born into each of the aforementioned birthweight groups for 1970-1971 and then for 1979-1980. It can be seen that for the birthweight groups which have the highest neonatal mortality, i.e., infants born weighing less than 2,000 grams, there was a minimal and not significant change in the percent of the babies born into those groups. In 1970-1971, 2.91% of infants were born weighing less than 2,000 grams. In 1979-1980, 2.84% of the infants born weighed less than 2,000 grams. By calculations not presented here, less than 5% of the total reduction in neonatal mortality from 1970-1980 could be accounted for by changes in birthweight distribution. The rest of the reduction in neonatal mortality occurred because infants of the same weight had improved survival rates.

There is a general concensus that because of 1) lethal congenital anomalies, 2) the presence of non-preventable fatal respiratory distress syndrome, and 3) other complications of prematurity, with current technology it is unlikely that neonatal mortality will fall much below 5 or 6 deaths per 1,000 live births.[4, 5] If this is true, then Alabama with a neonatal mortality of 8-9/1,000, could further reduce its neonatal mortality by nearly 30%. To explore the potential for continued improvements in neonatal mortality, we used our data to make some projections about where improvements in neonatal mortality are likely to occur.

TABLE 1

The Percent of Births, the Percent of Neonatal Deaths, and the Neonatal Mortality Rate (NMR) By Birthweight in Alabama for the Years 1976 Through 1980

Birthweight Categories	*% Births*	*% Deaths*	*NMR*
500- 999 grams	.5	33.8	663
1000-14999 grams	.7	16.6	222
1500-1999 grams	1.6	10.3	59
2000-2499 grams	5.2	9.6	17
2500-3999 grams	82.1	25.7	3
> 3999 grams	10.0	3.9	4

To make projections of Alabama's potential reduction in neonatal mortality, we evaluated neonatal mortality in various birthweight groups for the state as a whole and compared these numbers to the best results by birthweight group reported in the literature.[4, 5, 6, 7] This analysis is presented in Table 4. We should note that for each of the low birthweight groups, neonatal mortality at the University of Alabama in Birmingham was approximately equal to those figures reported in the literature during the time period under considera-

TABLE 2

The Number of Neonatal Deaths, the Neonatal Mortality Rate (NMR) and the Percent Reduction in the Neonatal Mortality Rate By Birthweight Categories in Alabama From the Averages for the Years 1970-1971 and 1979-1980

	1970-1971		*1979-1980*		
Birthweight Categories	*Avg. # Deaths*	*NMR*	*Avg. # Deaths*	*NMR*	*% Reduction in NMR*
500- 999 grams	233	772	177	579	9
1000-1499 grams	221	433	68	153	32
1500-1999 grams	136	123	45	44	19
2000-2499 grams	135	35	38	12	20
2500-3999 grams	265	5	156	3	21
> 3999 grams	18	3	21	3	-0-

TABLE 3

The Percent of Total Live Births by Birthweight Categories in Alabama, From 1970-1971 Through 1979-1980

Birthweight Categories	*1970-1971 % Births*	*1979-1980 % Births*
500- 999 grams	.46	.49
1000-1499 grams	.77	.71
1500-1999 grams	1.68	1.64
2000-2499 grams	5.91	4.96
2500-3999 grams	83.29	81.92
> 3999 grams	7.89	10.28

tion. These data confirm that excellent neonatal mortality results are possible in Alabama.

It is difficult to estimate the potential reduction in the neonatal mortality rate for infants weighing greater than 2,500 grams. Clearly, at least 50% of the deaths in this birthweight group are related to lethal congenital anomalies. Other causes of death include asphyxia, meconium aspiration, and birth trauma, which are among the preventable causes. A decline in the neonatal mortality of infants weighing greater than 2,500 grams could be achieved by the reduction of these preventable causes of death. However due to the large numbers of infants born in Alabama weighing more than 2,500 grams, the many hospitals and physicians providing care, and the multiple causes of death, it appears unlikely that any specific intervention will have a major effect on mortality in this birthweight group.

On the other hand, in most of the birthweight groups below 2,500 grams, it seems that there is considerable room and likelihood for improvement. In fact, if the state's neonatal mortality for each of the birthweight groups was equal to the best reported, Alabama's neonatal mortality rate would be reduced by 25 percent and become approximately 6 per 1,000 live births. From this analysis, we can state that a substantial reduction in Alabama's neonatal mortality is possible without increasing current levels of medical expertise, if this expertise were equally available to all infants weighing less than 2,500 grams.

Regionalization of perinatal care, i.e., the utilization of regional centers with the latest medical technology for those mothers and infants at highest risk, has been credited with much of the improvement in neonatal mortality. In Alabama, during the past ten years, perinatal regionalization has advanced considerably. Part of this regionalization has consisted of the transport of mothers likely to deliver a low birthweight or sick infant. The other component has consisted of the transport of already delivered low birthweight and sick newborns. There is accumulating evidence that infants transported prior to birth in utero do better than those transported afterward.[8, 9, 10, 11, 12]

As a measure of regionalization in Alabama we chose to utilize the percent of newborns in various birthweight catagories delivered at a perinatal center. While there were many potential definitions of a ''perinatal center'' we chose to use the following: A hospital with an obstetrician, a pediatric newborn specialist and the ability to provide continuous respiratory support for a sick newborn. Table 5 shows that in 1970 only 13% of infants born weighing 500 to 999 grams were born at a perinatal center. By 1980, 59% of newborns in this birthweight catagory were born at a perinatal center. Virtually the same proportion is seen in infants weighing 1,000 to 1,499 grams. Fifteen percent of infants born weighing 1,500-1,999 grams in 1970 were born at a perinatal center; in 1980, 45% of these infants were born at a perinatal center. Using these figures as a measure of perinatal regionalization, we can see that considerable progress toward regionalization has occurred in the last decade.

However, more than 40% of the states highest risk newborns (i.e., babies born weighing between 500 and 1,499 grams), did not have the benefit of the highest level of perinatal care from the moment of birth. We suspect that had this level of care been available to the very low birthweight infants not delivered at a perinatal center, that neonatal mortality in Alabama could have been reduced by a substantial amount.

We should emphasize that transporting these fetuses prior to delivery will not make a major change in the delivery rates at various hospitals. Infants born weighing less than 1,500 grams account for only 1.2% of all of Alabama's newborns or approximately 725 per year.[2] Since 60% of these are already born at a perinatal center, an additional 40%, or only 290 additional maternal-fetal pairs, would need to be transported each year. Since nearly 2,000 of Alabama's mothers and infants were involved in maternal or infant transport in

TABLE 4

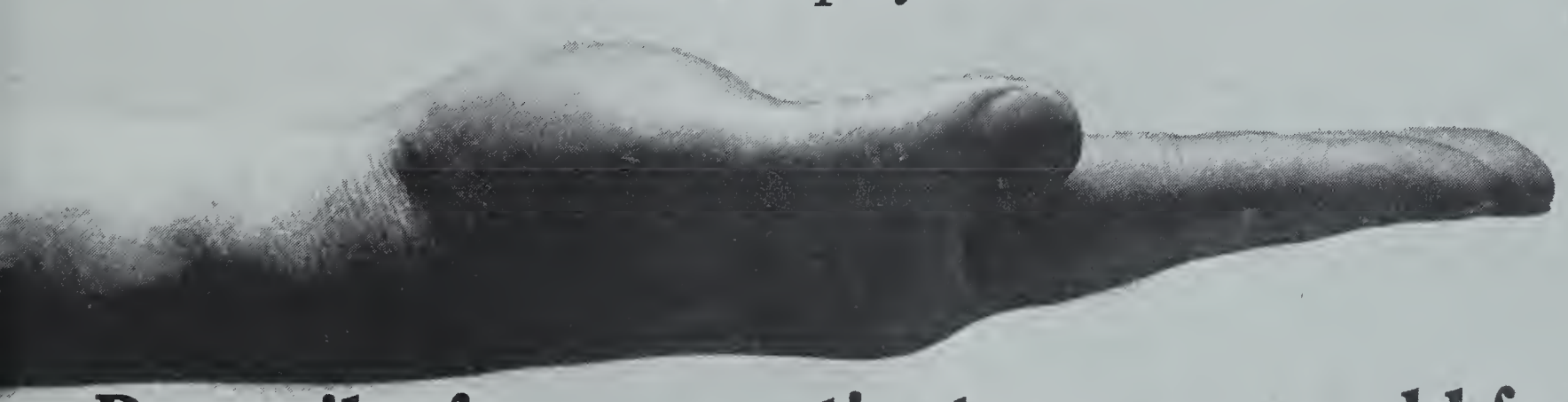
Alabama's Birthweight Specific Neonatal Mortality Rate (NMR) and Average Number of Neonatal Deaths By Birthweight for the Years 1976-1980; the Birthweight Specific Neonatal Mortality Rate Reported from Various Medical Centers (Literature NMR)[4, 5, 6]; the Potential Annual Number of Neonatal Deaths; and the Potential Annual Reduction in Neonatal Deaths. Deaths and Births of Unknown Birthweight and Births to Residents Which Occurred Out of State and Infants Born Weighing Less Than 500 Grams Are Not Included in These Calculations.

Birthweight Categories	*Alabama's NMR*	*Literature NMR*	*Alabama's Avg. Number of Neonatal Deaths*	*Alabama's Potential Number of Neonatal Deaths Based on Literature NMR*	*Alabama's Potential Reduction in Neonatal Deaths*
500- 999 grams	663	530	189	151	38
1000-1499 grams	222	120	93	53	40
1500-1999 grams	59	50	58	49	9
2000-2499 grams	17	11	54	34	20
> 2499 grams	3	2	166	111	55
Total Number of Deaths			560	398	162

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vague aches and pains
sadness
psychic and somatic anxiety

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in moderate depression and anxiety

Limbitrol® IV

Tablets 5-12.5 each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)
Tablets 10-25 each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt)

Specific therapy with h.s. dosage convenience

Please see summary of complete product information on following page.

LIMBITROL® TABLETS Tranquilizer—Antidepressant

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of moderate to severe depression associated with moderate to severe anxiety

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated: sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:

Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased to six tablets or decreased to two tablets daily as required. Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.

How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50.

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TABLE 5

The Percent of Live Born Infants in Low Birthweight Categories Delivered in Alabama's Perinatal Centers in 1970 and 1980. Perinatal Centers Are Defined as a Hospital With Obstetricians and Neonatologists in Attendance and a Nursery Facility Able to Provide Continuous Respiratory Support for Infants. In 1970 Only University of Alabama in Birmingham (UAB) and University of South Alabama (USA) Hospitals Qualified as Perinatal Centers. For This Study, in 1980, UAB, USA, Huntsville, Druid City, Montgomery Baptist, Cooper Green, St. Vincent's, Brookwood and St. Margaret's Hospitals Were Considered Perinatal Centers.

Birthweight Categories	*Percent of Births*	
	1970	*1980*
500- 999 grams	13	59
1000-1499 grams	14	59
1500-1999 grams	15	45
2000-2499 grams	12	39
ALL INFANTS	08	32

1977, an additional 290 transports would not alter this picture appreciably.[13]

Another phenomenon that has contributed to the reduction in neonatal mortality in Alabama during the last decade has been the increasing percentage of in hospital deliveries compared to out of hospital deliveries. In 1970 nearly 5,000 women in Alabama had their babies out of a hospital compared to approximately 500 in 1980. Data, which will be presented elsewhere, indicate that in Alabama out of hospital delivery carries a twofold risk for neonatal mortality even when the characteristics of the mothers are equivalent.

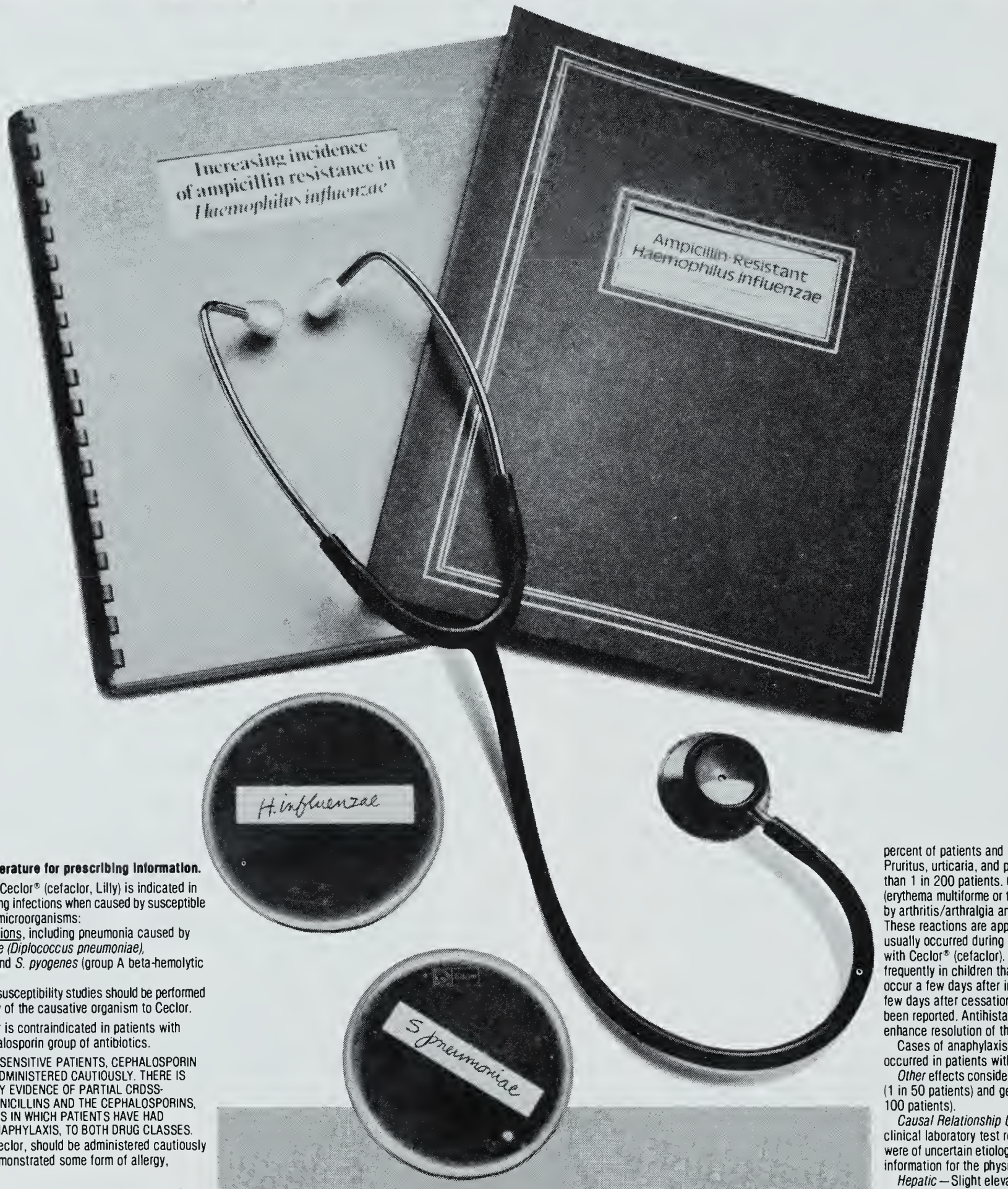
In summary, we have tried to describe some characteristics of the newborns who die in Alabama. We have also shown where improvements in mortality have taken place over the last ten years and in which groups of infants further improvement is likely. From this analysis, it can be clearly seen that much of the recent improvement in neonatal mortality has been in low birthweight infants. Further regionalization for the ½ of 1% of very low birthweight infants (less than 1,500 grams) not now receiving perinatal center care from the moment of birth should bring about considerable improvement in neonatal mortality in the next several years.

There is considerable legitimate concern about the quality of the newborns that are surviving because of the improvement in the quality of perinatal care. The accompanying article reviews, and I believe alleviates, much of that concern.

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An added complication... in the treatment of bacterial bronchitis*



Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established.

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below:

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor
Pulvules®, 250 and 500 mg

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.[8]

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

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200066

Prognosis for Alabama Infants With Birthweights ≤ 1000 Grams

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The prognosis for infants of low birthweight (LBW) has improved dramatically over the last several decades. In the 1940's and 1950's, the survival of LBW infants was poor and the incidence of major handicapping conditions such as cerebral palsy, mental retardation, and blindness in survivors was significant. Major advances in obstetrical care and care of the sick or premature newborn have greatly decreased mortality. Table 1 describes the morbidity and mortality of LBW infants over the past several decades through 1975. These statistics were compiled from review of world medical literature. Questions remain, however, about the quality of life for the surviving infants and how Alabama results compare with national and international figures. In addition, the economic costs[1] incurred by neonatal and obstetric care compels a closer look at long-term outcomes for these high risk infants.

Follow up studies of infants born in the 1940's-1960's are discouraging with handicapping sequelae experienced by an alarming proportion of survivors.[2-4] During those years, many well intentioned therapeutic interventions contributed to significant subsequent problems. These therapies included overzealous administration of oxygen which contributed to the development of retrolental fibroplasia and blindness and the use of sulfonamides and/or chloramphenicol given to protect newborns from life-threatening infections. These particular antibiotics resulted in such sequelae as kernicterus or circulatory collapse. Neurologic handicaps have been described in many of those surviving children by several investigators. Table 2 summarizes the results of these studies.

Neonatal intensive care became widely available in the late 1960's and early 1970's. More recently, regionalization of care for infants requiring specialized medical care has been promoted. The results of the regionalization efforts, which include the development of educational programs for local primary care providers in the management of the high risk pregnant woman, establishment of referral networks to facilitate transport if needed to a "perinatal center" for delivery, and stabilization of the sick neonate to optimize chance of survival, have greatly reduced the mortality for this group of neonates.

The evaluation of outcomes of surviving infants since the development of neonatal intensive care has been promising.[5-8] Results of studies performed on infants born subsequent to the establishment of NICU's are shown in Table 3. Most of these studies were performed on children demographically quite different from those children receiving NICU care in Alabama.

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TABLE 1
COLLECTED SUMMARY OF WORLDWIDE MORTALITY AND MORBIDITY OF LOW BIRTHWEIGHT INFANTS 1945-1975

Weight (Gms.)	*1945*		*1955*		*1965*		*1975*	
	Mort.	*Morb.*	*Mort.*	*Morb.*	*Mort.*	*Morb.*	*Mort.*	*Morb.*
≤ 1000	95	98	92	95	80	55	70	25
1001-1250	95	73	65	60	38	45	25	15
1251-1500	86	50	60	35	25	55	18	8
1501-2000	45	30	35	20	8	10	8	3
2001-2500	25	10	20	8	2	4	2	1

TABLE 2
OUTCOME OF VLBW PRE-NICU CARE

Author	*Birth Years*	*Number*	*Weight (Gms.)*	*Age (Yrs.)*	*% Normal*
Lubchenco	1947-50	14	789-1100	10	7%
Drillian	1948-56	14	794-1100	6-10	29%
Dann	1940-52	73	740-1280	3-11	40%

TABLE 3
OUTCOME OF VLBW POST-NICU CARE

Author	*Birth Years*	*Number*	*Birthweight (Gms.)*	*Age (Yrs.)*	*% Normal*
Alden	1965-70	20	680-1000	6	65%
Dweck	1968-70	14	960-1100	1-3	79%
Stewart	1965-75	27	648- 998	1-8	78%

To answer the concerns regarding outcome for Alabama NICU graduates, a Follow-Up Program was implemented at the University of Alabama in Birmingham.

Since 1977, we have conducted a Follow-Up Clinic (NBFC) for all infants with birthweight ≤ 1000 gms who received care at University Hospital of UAB and Cooper Green Hospital. As has been previously noted, this weight group historically has been at greatest risk for subsequent developmental disabilities. The purpose of the NBFC has been: 1) early detection of developmental/physical handicaps, 2) prompt referral for habilitative treatment, 3) assessment of outcomes, and 4) training of multidisciplinary personnel in evaluation of children of VLBW.

The Clinic was designed to supplement the evaluations performed by the child's primary care physician and the care given in NBFC is purely diagnostic and consultative. The NBFC is staffed by individuals within multiple disciplines and the staff includes a pediatric nurse practitioner who serves as coordinator, a pediatrician, developmental therapist, social worker, psychologist, audiologist, nutritionist, optometrist and dentist. Children are seen at chronologic ages of 6 months, 1 year, 2 years, 4 years, and 7 years of age. The schedule of assessments performed at each age is shown on Table 4.

The NBFC has examined 140/163 children born from 1976-1981 who weighed ≤ 1000 gms at birth. The results are reported on those infants (126/140) who were at least one year of age at the time of their last assessment because it has been apparent that most major handicapping conditions are recognizible by age one year. The demographic characteristics of this population are shown in Table 5. Those infants surviving without a major handicap are detailed by birthweight and year of birth in Table 6.

TABLE 4
NEWBORN INTENSIVE CARE FOLLOW UP CLINIC
SCHEDULE OF EVALUATIONS

	6 Mos.	*12 Mos.*	*2 Yrs.*	*4 Yrs.*	*7 Yrs.*
Physical exam	X	X	X	X	X
Developmental	X	X	X	±	±
Psychologic		X		X	X
Audiologic	X	X	X	±	±
Nutritional	X	X	X	X	X
Optometric	X	X	X	X	X
Social Service	X	X	X	X	X
Dental			X	X	X

TABLE 5
DEMOGRAPHIC CHARACTERISTICS

Race	58 White 67 Black	1 Other
Sex	72 Female 54 Male	
Weight	Mean 874 gms	(640-1000 gms)
Gestational Age	Mean 28.4 wks	(24-38 wks)

Major disability is defined as cerebral palsy (i.e. spastic deplegia, quadriplegia, hemiplegia) significant enough to interfere with normal life activities, mental regardation (DQ or IQ ≤ 70), blindness, deafness, or severe failure to thrive.

As birthweight increased, the percent of children with a significant handicap decreased. For infants of birthweight ≤ 800 gms, 37.5% had significant disability; 801-850 gms, 33%; 851-900 gms, 22%; and 951-1000 gms only 6% survived with evidence of handicap by age one year. For the entire group of infants whose birthweight was ≤ 1000 gms, only 25% showed major handicaps. Thus, 75% of these VLBW infants appear to be surviving without significant disabilities. The 25% of children who have exhibited major handicaps are described in Table 7. Nineteen of the 29 children had multiple major handicaps.

Although we have not yet documented any real change in the incidence of developmental disabilities between surviving infants in 1974 compared to 1980, the overall survival of these infants has increased threefold from 18% to 60%. Despite this, the percent of survivors with major disabilities has not increased. Perhaps even more important is the speculation that many of the survivors did so *without* optimal obstetric or pediatric management. That is, the fetuses may not have been expected to be viable and therapeutic methods that may have been applied to larger infants (such as cesarean section for fetal distress) were not performed routinely. With the increasing awareness of health care providers of the improving outcomes, it may be that morbidity will also decrease.

TABLE 6
SURVIVAL WITHOUT MAJOR MORBIDITY BY WEIGHT (GMS) AND YEAR OF BIRTH
AT THE UNIVERSITY OF ALABAMA

Year of Birth	*< 750*	*750-800*	*801-850*	*851-900*	*901-950*	*951-1000*	*Total*
1974 (N = 6)	-	-	-	3/4	2/2	NA	5/6
1975 (N = 9)	0/2	-	1/1	1/2	2/3	NA	4/8
1976 (N = 14)	2/3	1/1	1/1	3/4	3/3	NA	10/12
1977 (N = 24)	1/1	0/2	1/3	6/7	5/5	4/5	17/23
1978 (N = 41)	1/3	2/2	2/2	6/9	3/3	11/11	25/30
1979 (N = 37)	4/4	1/1	1/3	4/5	0/3	6/6	16/22
1980 (N = 32)	2/3	1/2	4/5	2/2	3/4	8/9	20/25
Total (N = 163)	10/16 62.5%	5/8 62.5%	10/15 67%	25/33 76%	18/23 78%	29/31 94%	97/126 77%

90% (126/140) examined at ≥ one year old.

TABLE 7
MAJOR MORBIDITY OF INFANTS ≤ 1000 GRAMS*
AT THE UNIVERSITY OF ALABAMA, 1974/1980
(N = 29)

Central nervous system	
"Cerebral palsy"	19
Hydrocephaly-acquired	5
Hydraencephaly	1
Developmental delay	18
Blindness secondary to	
Retrolental Fibroplasia	2
Optic Atrophy/Cortical Blindness	4
Nystagmus	1
Growth	
Severe failure to thrive	3
Deafness	
Sensorineural hearing loss	1

* Multiple major Handicaps: 19.

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25,500,000 geriatric patients. The older patient may have some disorder or socio-economic problem that can undermine good nutrition.[2]

23,500,000 surgical patients. Nutritional status can be compromised by the trauma of surgery; and some operations interfere with the ingestion, digestion and absorption of food.[3]



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candidates for

Rx ONLY **Berocca® Plus** TABLETS

THE MULTIVITAMIN/MINERAL FORMULATION

Out of Hospital Deliveries in Alabama 1940-1980

John Houde
Joan L. Humphrey, M.P.H., M.B.A.
Beverly W. Boyd, M.D., M.P.H.
Robert L. Goldenberg, M.D.

As part of a larger study evaluating neonatal mortality in Alabama, the women who delivered their babies out of hospital and the trend in this phenomenon over time were studied. The percent of women having out of hospital deliveries by race in Alabama was compared to that of the United States. Also, since the major provider of care for a woman having an out of hospital delivery has been the granny midwife, the number of granny midwives permitted to practice in Alabama in selected years since 1940 is presented. Alabama data for the following tables were provided by the Bureau of Vital Statistics and the Bureau of Maternal and Child Health of the Alabama State Health Department. United States data were derived from the Vital Statistics Reports of the National Center for Health Statistics.[1, 2]

Figure 1 shows the percent of out of hospital births in Alabama and the United States by race for selected years from 1940 to 1980. Nationally, in 1940, 40 percent of the white United States' births compared to 72 percent of non-white United States' births took place out of hospital. By 1960, only one percent of the white births in the United States and fifteen percent of the non-white births took place out of hospital. By 1977, the last year for which there is national data available, 1.4 percent of all white births and 1.7 percent of all non-white births in the United States took place out of hospital.

Looking at Alabama births by race, we can see that in 1940, nearly 73 percent of white births and more than 90% of non-white births took place out of hospital. By 1960, 46 percent of the non-white births still occurred outside of a hospital while only 3 percent of white births occurred outside of a hospital. In 1980, the last year for which there are state statistics available, one percent of white births and nearly 2 percent of non-white births in Alabama took place outside of a hospital.

Because race seemed to play such an important role in where a woman had her baby, a comparison was performed using the percentage of out of hospital births in Alabama versus the United States' averages by race. From this comparison, it can be seen that in Alabama during 1940, more than 70 percent of the white babies were delivered out of hospital compared to only 40 percent for the United States. By 1960, these numbers had declined to 2.7 percent in Alabama compared to 1.1 percent for the United States as a whole. In 1965, Alabama's percent of white out of hospital deliveries became equivalent to the rest of the United States. Since the mid 1970's, Alabama's percent of white out

From the Department of Obstetrics and Gynecology of the University of Alabama in Birmingham and the Bureau of Maternal and Child Health of the Alabama State Health Department.

Reprint Requests To: Robert L. Goldenberg, M.D., Department of Obstetrics and Gynecology, the University of Alabama in Birmingham, School of Medicine, University Station, Birmingham, Alabama 35294.

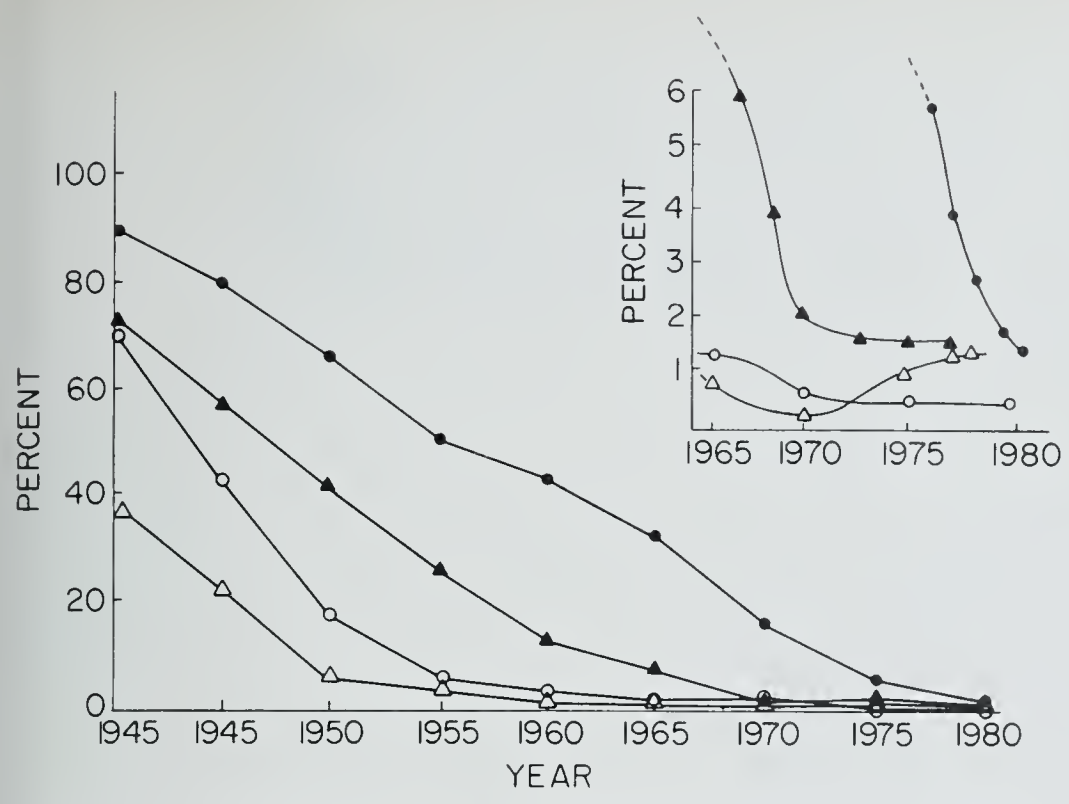


Figure 1. The percent of out of hospital deliveries for Alabama and the United States in selected years from 1940 to 1980. Δ = United States white; ▲ = United States non-white; ○ = Alabama white; ● = Alabama non-white.

of hospital deliveries has been lower than the national average and has become constant at approximately 0.5 percent of all white births. The small rise in the national white out of hospital births is likely due to the home birth/birth center movement which is common in the western and northeastern states.

We next compared the percent of out of hospital births for non-white women in Alabama to the non-white national statistics. In 1940, more than 70 percent of the United States' non-white women had their infants outside of a hospital. In the same year, 90 percent of Alabama's non-white women had their infants outside of a hospital. By 1960, despite reductions in both United States and Alabama percentages, the discrepancy between the United States' averages and Alabama's had widened even further. In that year, 45 percent of Alabama's non-white women had their infants outside a hospital compared to 15 percent nationally. During the late 1960's, Alabama had a precipitous decline in non-white out of hospital births. One of the explanations for this decline is the initiation of the Medicaid program in those years. Finally, during 1980 approximately 1.5 percent of Alabama's non-white births occurred outside a hospital. We estimate that this number for the United States will be one to two percent. Therefore, only recently have non-white Alabama births approached the national average for out-of-hospital deliveries.

In recent years, the granny midwife has been the primary caregiver in Alabama to those women having their infants out of hospital, although in past decades physicians provided some of that medical care. In 1950, for example, 57 percent of the out of hospital births were attended by a granny midwife. In 1960, because of the reduction in physician participation, 80 percent of out of hospital deliveries were attended by a granny midwife. In 1980, 63 percent of out of hospital

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BEFORE USING INDERAL (PROPRANOLOL HYDROCHLORIDE), THE PHYSICIAN SHOULD BE THOROUGHLY FAMILIAR WITH THE BASIC CONCEPT OF ADRENERGIC RECEPTORS (ALPHA AND BETA), AND THE PHARMACOLOGY OF THIS DRUG

CONTRAINDICATIONS

INDERAL is contraindicated in 1) bronchial asthma; 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock; 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs.

WARNINGS

CARDIAC FAILURE: Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta-blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. INDERAL acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e.*, that of supporting the strength of myocardial contractions). In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by INDERAL's negative inotropic effect. The effects of INDERAL and digitalis are additive in depressing AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances, this has been observed during INDERAL therapy. Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, INDERAL therapy should be immediately withdrawn. b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over.

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised. Special consideration should be given to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS DURING ANESTHESIA with agents that require catecholamine release for maintenance of adequate cardiac function, beta blockade will impair the desired inotropic effect. Therefore, INDERAL should be titrated carefully when administered for arrhythmias occurring during anesthesia.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli. For this reason, with the exception of pheochromocytoma, INDERAL should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, in case of emergency surgery, since INDERAL is a competitive inhibitor of beta receptor agonists, its effects can be reversed by administration of such agents, *e.g.*, isoproterenol or levarterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e.g.*, CHRONIC BRONCHITIS, EMPHYSEMA), INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA. Because of its beta-adrenergic blocking activity, INDERAL may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia. This is especially important to keep in mind in patients with labile diabetes. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

USE IN PREGNANCY. The safe use of INDERAL in human pregnancy has not been established. Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit. Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity. Occasionally, the pharmacologic activity of INDERAL may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function.

ADVERSE REACTIONS

Cardiovascular: bradycardia, congestive heart failure; intensification of AV block; hypotension, paresthesia of hands; arterial insufficiency, usually of the Raynaud type; thrombocytopenic purpura.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Miscellaneous: reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DOSAGE AND ADMINISTRATION

ORAL

HYPERTENSION - *Dosage must be individualized*: The usual initial dosage is 40 mg INDERAL twice daily, whether used alone or added to a diuretic. Dosage may be increased gradually until adequate blood pressure is achieved. The usual dosage is 160 to 480 mg per day. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

While twice-daily dosing is effective and can maintain a reduction in blood pressure throughout the day, some patients, especially when lower doses are used, may experience a modest rise in blood pressure toward the end of the 12 hour dosing interval. This can be evaluated by measuring blood pressure near the end of the dosing interval to determine whether satisfactory control is being maintained throughout the day. If control is not adequate, a larger dose, or 3 times daily therapy may achieve better control.

PEDIATRIC DOSAGE

At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

INTRAVENOUS

The intravenous administration of INDERAL has not been evaluated adequately in the management of hypertensive emergencies.

OVERDOSAGE OR EXAGGERATED RESPONSE

IN THE EVENT OF OVERDOSAGE OR EXAGGERATED RESPONSE, THE FOLLOWING MEASURES SHOULD BE EMPLOYED:

BRADYCARDIA—ADMINISTER ATROPINE (0.25 to 1.0 mg). IF THERE IS NO RESPONSE TO VAGAL BLOCKADE, ADMINISTER ISOPROTERENOL CAUTIOUSLY.

CARDIAC FAILURE—DIGITALIZATION AND DIURETICS.

HYPOTENSION—VASOPRESSORS, *e.g.*, LEVARTERENOL OR EPINEPHRINE (THERE IS EVIDENCE THAT EPINEPHRINE IS THE DRUG OF CHOICE).

BRONCHOSPASM—ADMINISTER ISOPROTERENOL AND AMINOPHYLLINE.

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Reference: 1. Freis, E. D. Hypertension (Suppl. II) 3:230 (Nov.-Dec.) 1981

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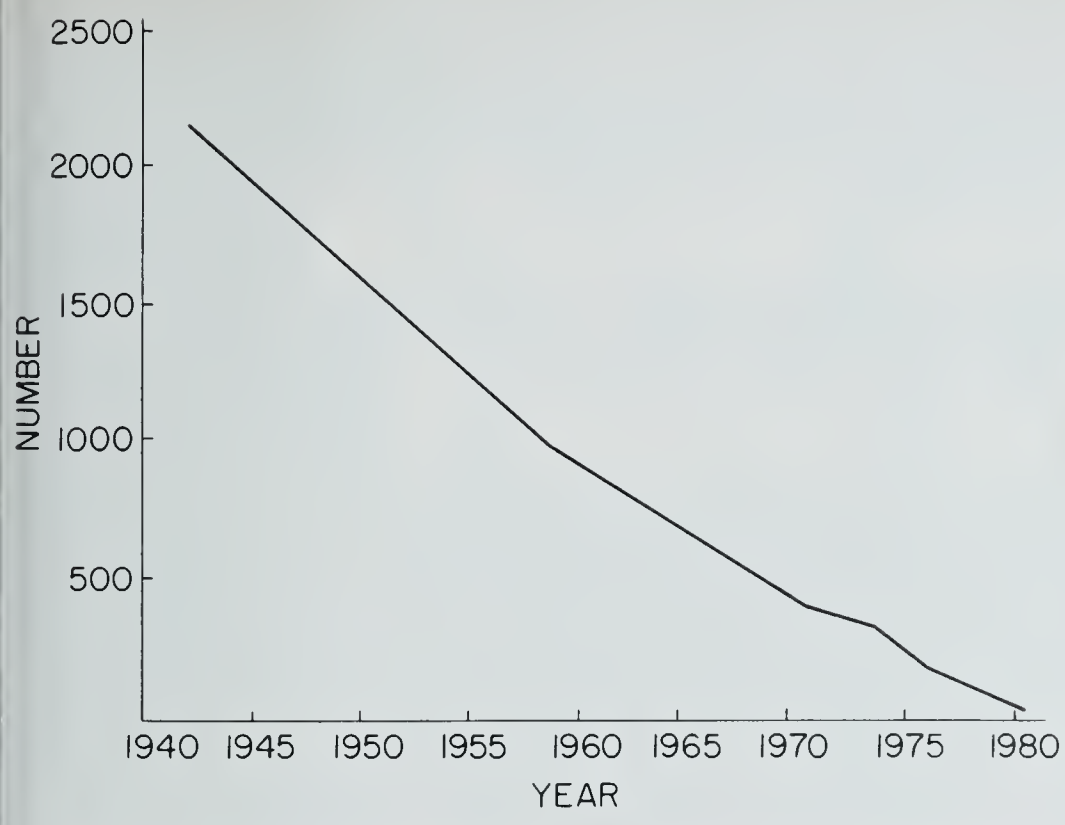


Figure 2. The numbers of granny midwives who received permits in selected years from 1942 to 1980.

deliveries were attended by a granny midwife, with most of the others delivered by non-physician attendants.

By state law, granny midwives are required to obtain a permit to practice from their local health department. There is also a series of State Health Department regulations which by law they are expected to follow. From observation and testing, we have learned that granny midwives generally do not have any specific body of medical knowledge, have had no specific training in childbirth and have none of the medical skills (i.e., such as listening to fetal heart tones or measuring blood pressure) normally associated with childbirth attendants.

Figure 2 shows the number of granny midwives who received permits from their local health department in selected years between 1942 and 1980. From the table, it can be seen that these numbers declined from 2,600 in 1940 to less than 100 in 1980. No new granny midwives have received permits since 1977.

The number of out of hospital deliveries attended by a granny midwife by county in 1980 is shown in Figure 3.[3] Houston, Butler, Montgomery, and Dallas counties had the largest number of granny midwife deliveries in 1980.

In summary, we have shown the trends in out of hospital deliveries for the United States and for Alabama by race. Despite a significant lag behind the national averages, in recent years, out of hospital births in Alabama (with the exception of several counties)

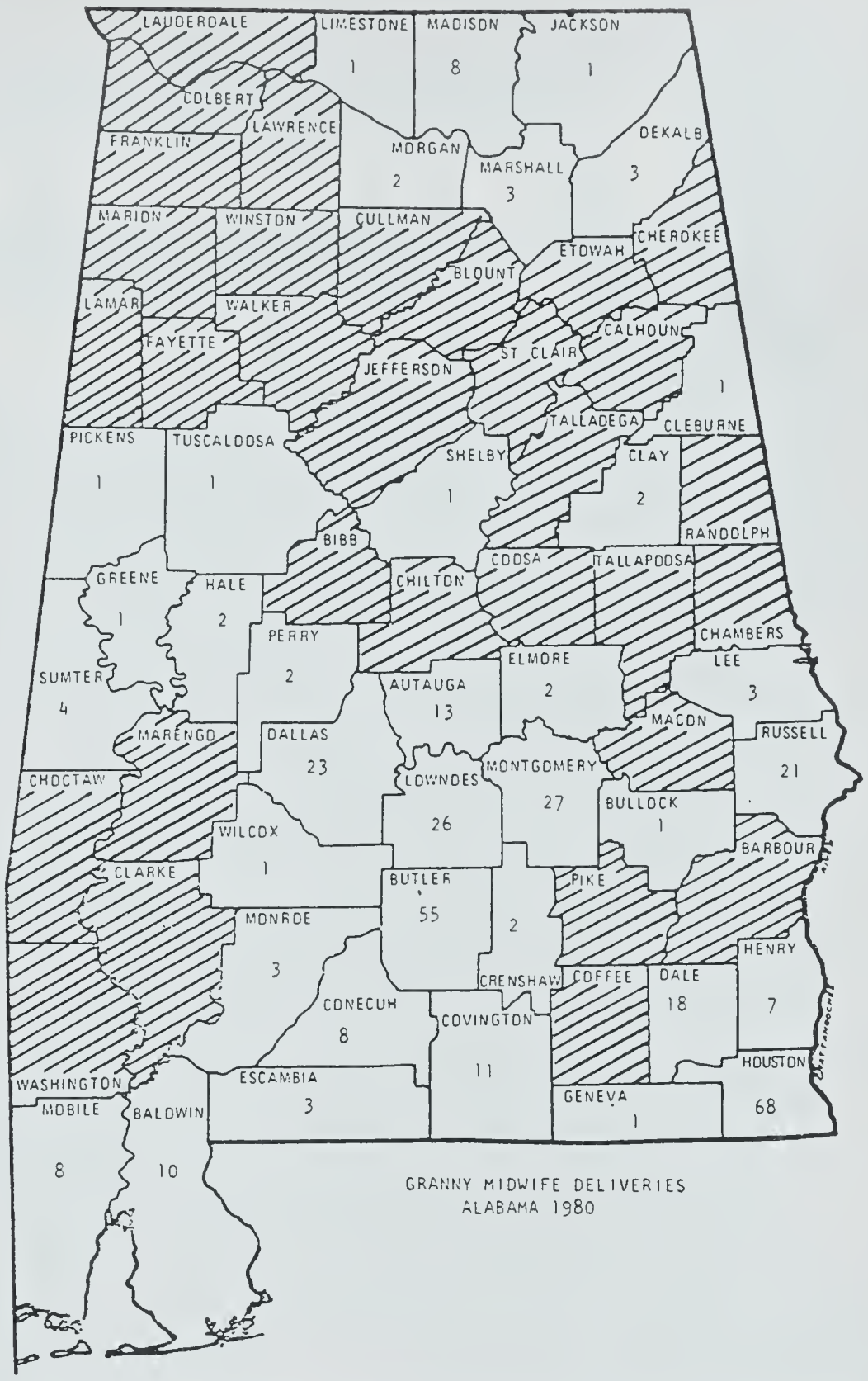


Figure 3. The number of out of hospital deliveries in Alabama attended by granny midwives by county in 1980. Shaded areas indicate no out of hospital deliveries attended by granny midwives. (Reproduced with permission of the Bureau of Maternal and Child Health, Alabama Department of Public Health.)

have ceased to be a common phenomenon. Also, it appears that the major care providers for out of hospital births, the granny midwives, are rapidly terminating their practices as women choose in-hospital delivery.

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The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions

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EDITOR'S PAGE

Safari

by William L. Smith, M.D.

We have received three related items. First came a delightful book about parasites and people, *New Guinea Tape-worms and Jewish Grandmothers.*[1] The second, a want-ad, seeks company on a safari into the Sudan. The third is the 18th edition of Manson's *Tropical Medicine.*[2] It seems that at one time tapeworms were not infrequent in New York City, that people are still intrigued by equatorial Africa, and that tropical diseases are ever present and of considerable medical as well as economic importance.

The fish tapeworm, *Diphyllobothrium latum,* was brought to this country by Scandinavian fishermen who settled in the Wisconsin and surrounding lake areas. There they did their thing and deposited D. latum. The fish in the lakes region became infested. The fish were caught and shipped to market, frequently alive.

New York City with a large Jewish population was a ready market for fresh water fish which were transformed into gefilte fish by Jewish housewives. During the mixing and seasoning of the dish, the women tasted the raw fish and spice mixture and in that way became infested with D. latum. Thus, utterly defeating the purpose of kosher cooking.

Having been thoroughly exposed to Craig and Foust text and overwhelmed by *Stitt's Tropical Medicine,* the 18th edition of Manson's *Tropical Diseases* is a pleasure to review. There are many additions in the 1982 volume.[3] Chapter one, Introduction, clearly outlines the variety of health problems encountered in the tropics. The book is as interesting as a novel or a detective story. Naturally, it is very informative as a scientific work. It is well worth reading, although it may change one's mind about going to the Sudan for pleasure.

Sudan, meaning black, lies south of Egypt and the Sahara, and west of Ethiopia and the Red Sea. It is just north of the Equator. Its southern portion is tropical; its northern area, sahara (desert). It is in the Sudan that the Nile river begins with the confluence of the Blue Nile out of Ethiopia and the White Nile from the South. The intermediate area is grass land. It is all tropical, all hot. The highest temperature to be expected is 113°F. and the lowest 60°F.

There is a recurrence of Schistosomiasis along the Nile. Before the high dam at Aswan, seasonal flooding of the Nile valley carried the snails into the vegetated fields to feed. When the water receded, the snails for the most part died. No snail, no schistosomiasis. Now the ecology has changed. The river no longer overflows. The snail, *Bulinus truncatus* of Egypt and the Sudan, prospers and propogate the schistosome.

Moses wouldn't have it very good today. Schistosomiasis has returned to the Nile.

African sleeping sickness *(Trypanosomiasis)* is endemic south of the Sahara. It is the great scourge of the Dark Continent, infecting both humans and domestic animals. Malaria is on the increase. Some do-gooders taught the natives to dig fish ponds and raise the rapidly growing taliper. This was fine for growing food. It was also fine for growing malaria transmitting mosquitoes.

Sudan, Nigeria, Angola, Gambia, Ghana and Zaire are infected with yellow fever. The World Health Organization updates this list weekly. Vaccination against yellow fever is advised.

According to Manson's *Tropical Diseases,* suggested immunization for travel in the tropics are tetanous toxoid, yellow fever, typhoid-paratyphoid, polio (oral), cholera, and perhaps a shot of gamma globulin and a malaria suppressant.

If the visitor escapes all the dreaded diseases of the tropics, he still might fall victim to climate. Or, non-infective diseases such as Amok or Koro.

Koro, or Shook Yong, as the orientals call it, is a "shriveling" feeling at regular intervals of the penis retracting into the abdomen. If this is not prevented the sufferer may die. The "yin" has dominated the "yang."

We intend to do our hunting in Coosa County.

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3. Sir Patrick Manson (1844-1922) wrote six editions of the book. Sir Philip Manson-Bahr (1881-1966), Manson's son-in-law prepared the next ten editions keeping each one abreast of the advances in knowledge.

Nineteenth Century Neurology/Psychiatry

Joseph A. Troncale, M.D.

This paper is intentionally divided into two parts. The first is an overview of the state of the art of neurology and psychiatry in the 18th and 19th century, and the second is a biography of Mobile's first specialist in nervous diseases, Dr. Eugene DuBose Bondurant. This division is both practical and orderly for the following reasons: The two parts of this paper could be submitted as separate investigations, and, in fact, this is not the first biography of Dr. Bondurant nor is it, of course, the first medical history ever written. It was my intention at the outset of compiling the information for this paper to learn as much as possible about the history of psychiatry and neurology since they are the fields of interest concerning my career in medicine. This history is an appropriate introduction into the biography of a man whose life and work does credit to those who came before him and of a man whose legacy presents a challenge to those of us who wish to follow humbly after him.

Joseph A. Troncale, M.D.
Mobile, Alabama

In a paper of this scope it is impossible to thoroughly trace the beginnings of each school of thought prevalent in the early 1900s for both neurology and psychiatry. Volumes on these disciplines do exist, however, and the reader is directed to these works for a complete discussion of the men and women mentioned in the following pages. It is not my intention to lead the reader into thinking that a hard and fast separation exists between the two disciplines of neurology and psychiatry, especially during the previous century. For the sake of clarity the history of the two will be discussed separately.

Neurology

Discussion of the field of neurology in the early nineteenth century could not begin without the mention of Franz J. Gall (1758-1828) of Vienna. A physiologist by training, his life's work was ultimately devoted to the "science" of phrenology which is defined in *English's Dictionary* as "a doctrine that the excellence of mental faculties or traits is determined by the size of the brain area upon which they depend, and this can be judged by the development of the skull overlying the areas." In practical terms, phrenology holds that human behavior can be predicted from the shape of the skull after enough people have been studied to relate the convolutions of the skull to human behavior.

As absurd as this sounds today, Gall's contribution to neurology was significant. Before this time, the study of the mind was relegated to the realm of metaphysics rather than biology. R. M. Young assessed Gall's contribution to science as "the thesis that behavior and the function of the brain as well as its functional organization are amenable to objective observations." Phrenology became the most respected way of viewing neurophysiology in the early 1800's, and its influence on later scientific experimentation is a very interesting evolutionary sequence.

Florens and Rolando were other neurophysiologists of note around the time of Gall. Independently, through brain ablation experiments, they were the first to produce scientific data relating the functions of various

parts of the central nervous system. Gall severely criticized their experimentation as being unscientific because, he argued, it was impossible to accurately predict a relationship between structure and function due to the gross techniques involved in ablation. However, brain ablation experimentation was accepted in many scientific circles, and as neurophysiology eventually began to take root as legitimate science, greater progress in the field followed.

In the 1820's, Francois Magendie, a Frenchman, pioneered physiological research. By far his greatest and most famous achievement was an experiment performed on eight young puppies. In this experiment he isolated the spinal nerves of the puppies and selectively severed the dorsal roots. Following this procedure he discovered that the dogs were able to move their limbs, but were insensible to pain or other stimulation. For the first time, motor function and sensory function were proven to be anatomically distinct at the level of the spinal cord. So important was this finding that it came to be known as the Bell-Magendie Law (also named after Sir Charles Bell, who independently postulated the same results on anatomical grounds). The Bell-Magendie Law can be viewed as the cornerstone of neurophysiology since, prior to these experiments, there had been little in the way of rigorous, replicable studies concerning specific pathways in the central nervous system. Magendie remained active in neurophysiology as well as teaching. Under Magendie's instruction Claude Bernard, who was later to become a famous endocrinologist, produced his first scientific paper on the anatomy of the chorda tympani.

Johannes Mueller took the next step in the development of modern neurology. His famous neurophysiology textbook written in the mid 1800's, *Handbuch der Physiologie des Menshen,* was significant not only in content, but also because of the place as an important branch of medicine given to neurophysiology. Mueller described such concepts as the Law of Specific Nerve Energy in which each sense organ produces its own sensation, as well as some of the first physiology studies in color perception. Important also is the influence exerted on his pupils Schwann, Henle, Virchow and Helmholtz, each of whom became a great name in medicine.

Charles E. Brown-Sequard (1817-1894) became still another notable contributor to neurophysiology during this period. He performed some of the best experiments of his time concerning the function of the spinal cord, describing in 1849 the syndrome, produced by hemisection of the cord, which bears his name.

An interesting divergence of approach between phrenology and neurology is that phrenology emphasizes the external, expounding the viewpoint that skull contour was the clue to underlying faculties, while neurology studied the function of the central nervous system from the periphery toward the brain itself. As physiology continued to triumph over phrenology, the concept of brain localization, i.e. that discreet areas of the brain subserve specific functions, fell into disrepute. Brain localization was for a time considered too ''phrenological.'' As late as 1870, motor and sensory function were thought by some respected neurologists to be located no higher than the corpus striatum, that is, below the cortical structures. Throughout the nineteenth century, men who followed Gall such as Schmidt, Rommel, Lurrey and Bouillard had been working with cerebral localization. In 1846 Carpenter postulated that the cortex was the seat of ideas concerning the objects of sensation such as perception, memory and conception of thoughts. The experimental evidence needed to demonstrate that the functions of the cerebral cortex were separable were supplied by Pierre Paul Broca, who demonstrated the motor centers of the cortex to be separate from the so-called ''thinking'' centers. In 1861 he described ''aphemia,'' which results from lesions in the posterior one-third of the second and third frontal convolutions. For the first time, precise function could be assigned to a specific location of the entire neuraxis.

Emil du Bois-Reymand (1818-1896), of French extraction born in Berlin, produced the final act in the evolutionary sequency begun by Gall. He became an assistant of Mueller who encouraged him to study the problems of electrophysiology. He eventually became the most renowned expert in the field. Helmholtz followed by measuring nerve velocity in 1850. Finally, in 1870, the psychiatrist Edvard Hitzig, Gustav Fritsch, a physician, stimulated animal brains with electrodes, thus demonstrating the excitability of the cerebral hemispheres and their relationship to the rest of the central nervous system. This gave neurologists of that day a more complete picture of the nervous system which, until then, had been shrouded in mystery.

It was at this point in history that Eugene DuBose Bondurant began his own studies in medicine. Here we will end our brief look at neurology and turn our attention to psychiatry, the field to which Dr. Bondurant devoted the final years of his practice.

Psychiatry

In all areas of medicine and science, including psychiatry, the 1700s came to be known as the epoch of the ''Enlightenment,'' a period during which the belief in reason replaced tradition and faith in nearly every aspect of society. Experimentation was widespread in all areas of science, and new ideas flooded the sciences. In psychiatry, some of the outstanding names of this era include William Cullen (1712-1790), Phillippe Pinel (1745-1826), Vincenzo Chiarugi (1759-1820), William Tuke (1732-1819) and Benjamin Rush (1745-1813).

Cullen's contribution to psychiatry was akin to Linnaeus' contribution to botany; that is, he succeeded in

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The Three Musketeers
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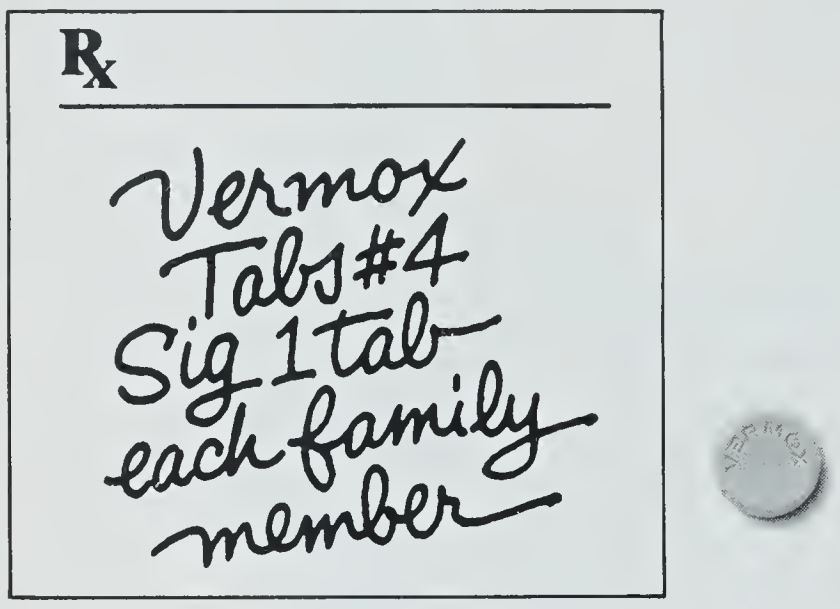
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INDICATIONS VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (common roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies as a function of such factors as pre-existing diarrhea and gastrointestinal transit time, degree of infection and helminth strains. Efficacy rates derived from various studies are shown in the table below:

	Whipworm	Common Roundworm	Hookworm	Pinworm
cure rates				
mean	68%	98%	96%	95%
(range)	(61-75%)	(91-100%)	—	(90-100%)
egg reduction				
mean	93%	99.7%	99.9%	—
(range)	(70-99%)	(99.5%-100%)	—	—

CONTRAINDICATIONS VERMOX is contraindicated in pregnant women (see Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

PRECAUTIONS *PREGNANCY:* VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

PEDIATRIC USE: The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

ADVERSE REACTIONS Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

DOSAGE AND ADMINISTRATION The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food. For the control of pinworm (enterobiasis), a single tablet is administered orally, one time. For the control of common roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days. If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

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comprehensively classifying mental illness in his four-volume *First Lines of the Practice of Physick* (1777). Cullen was the first person to use the word "neurosis" to mean diseases not accompanied by fever or local pathology. Although Cullen made significant advances in classification of mental illness, his treatment of the disturbed and insane was not unlike most of his other contemporaries who used severe restraint, threats and straight-jackets.

The Enlightenment was an important time for reforms in mental health. Phillippe Pinel would be considered by most people to be the original and most famous of the reformers. Pinel studied medicine in Toulouse, did post-graduate work in Montpellier and practiced in Paris until his death.

Pinel's classification of mental illness was simpler and superior to Cullen's. His psychological orientation gave him the first truly modern outlook on mental disease. He attributed mental illness to heredity and life experiences rather than the popularly acclaimed "organic causes" such as "cerebral hyperemia," "hardening of the nerves" or "intemperateness of the brain." Pinel along with Vincenzo Chiarugi in Italy and William Tuke in England is most widely remembered for introducing moral treatment for the insane. Moral treatment meant approaching mental patients as sick human beings deserving and requiring medical treatment.

In the early 1800s, before Pinel, Chiarugi and Tuke began their reforms, the mental hospitals in Europe were a lot like today's zoos. On Sundays, Bedlam Hospital in London charged admission, so that Londoners could observe the insane through iron gates. Patients were imprisoned, kept in chains and fed terrible food. Often they were submitted to so-called harmless torture such as emetics and bloodletting. Pinel and the other reformers began upgrading treatment. Patients were freed from their chains, and the newly established hospitals began treating patients as human beings. The reformers were not all alike in their motivation for reforms, but because these changes worked so well, moral treatment became the treatment of choice in mental health. A new era in psychiatry had begun.

In the United States, moral treatment was championed by Benjamin Rush (1745-1813) who became known as the "Father of American Psychiatry." Rush did his medical training at Edinburgh and was influenced heavily by Cullen and Sydenham. Although his medical approach to mental illness was not unlike Cullen's, Rush's contributions to psychiatry lie mainly in his recognition of the psychogenic origins of mental illness and in his contributions to the reform of institutional treatment.

Franz Mesmer, a physician from Iznang, Austria, is another 18th century figure who should not be overlooked. When he graduated in 1766 from the University of Vienna Medical School, the title of his dissertation

provided a clue to his future endeavors. In "Influence of the Planets," he discussed the role of heavenly bodies in relation to the physiology of man. Mesmer originated the concept of animal magnetism and formulated these concepts into elaborate propositions concerning "the mutual influence between man and the planets." This included the idea about a mysterious body fluid with "properties similar to a magnet." Mesmer married his way into Viennese society and became quite influential, especially when he began "curing" hysterical women with his "magic fluid." Eventually an outraged Vienna forced him to leave because of possible indiscretions in some of his relationships with female patients. He then went to France where he again became influential. However, a death blow to "mesmerism," as his theories were called, came in 1784. A commission, chaired by Benjamin Franklin and appointed to study Mesmer's theories, decided that there was no such thing as animal magnetism. After this decision, Mesmer sunk into oblivion.

As we further examine the history of psychiatry in the early 1800s, it becomes clear that during this era psychology has its beginnings as science. This period can justifiable be called, perhaps more so than the 1800s, the pre-Freudian era. Famous men of this time, such as Jean E. D. Esquirol (1772-1840) called by Mora "the first complete psychiaerist," followed closely in the footsteps and of his teacher, Pinel. Others, however, such as J. C. Reil and the German Romanticists, were convinced that mental disease was a psychological phenomenon needing psychological treatment. Although not nearly so popular as Freud, the German psychiatrist Johann Christian Heinroth (1773-1843) was the forerunner of psychoanalytic thought. He described such hypothetical constructs as id and ego and their relationship to the conscience in creating psychological conflict. Heinroth was also the first person to use the term "psychosomatic."

Other names of this period include Guillaume Ferrus (1784-1861) who, like Esquirol, continued reforming French mental hospitals in the fashion of his teacher, Pinel; John Conolly (1794-1866) of England, who introduced the concept of non-restraint of patients; Ernst von Feuchtersleben (1806-1849), who criticized the mind-body dichotomy; and Friedrich Beneke (1798-1854), who was another early psychosomaticist.

The second half of the 19th century in psychiatry was dominated by the tend away from romanticism and toward organic concepts. This paralleled the developments in neurology typified in Wilhelm Griesinger's (1817-1868) *Pathology and Therapy of Mental Diseases* (1845), in which mental disease was explained only on the basis of physical changes in the nervous system. This line of thought was given impetus in 1857 when Esmasch and Jessen first suggested the connection between general paresis and syphilis. It became fashionable for a time to pursue complete metabolic work-ups in patients with mental disease, usually without positive results.

This period was also the era of "university psychiatry," where in Europe new professional chairs were established in practically every medical center. However, in the United States this was a "catch-up" period of time represented by institutionalization which had dominated the European scene earlier in the century. During this period Dorothea Dix (1802-1887), the great reformer of America's mental institutions, became prominent.

By far the premiere predynamic psychiatrist of this era was Emil Kraepelin (1856-1926). Kraepelin graduated at Wurzburg in 1878 and later began doing psychophysiological research with Wundt. He became a professor of psychiatry in several German Universities, finally settling in Munich in 1904. His most influential work was *Kompendium der Psychiatrie,* which reached several volumes between its first printing in 1883 and its final form in 1899. Kraepelin made solid contributions in the areas of legal and social psychiatry, classification of mental illness. He has been criticized for being rigid in his scheme of classification, but as Alexander and Selesnick say: "Without this (careful, precise) orientation, psychiatry could never have become a clinical, disciplined specialty of medicine."

This then, briefly, is the milieu in which Dr. Bondurant found himself in the late 1800's regarding neurology and psychiatry. Given this background, the examination of Dr. Bondurant's work is given perspective. We shall see in his scientific writings the influence of many who have been mentioned in the preceding pages, but it will also outline the originality and genius of this man.

> *Psychiatry is a pioneering field, which, because of its very nature, must include the study of the total personality. It therefore touches all medical specialties and also the social sciences.*
>
> Alexander & Selesnick
> *The History of Psychiatry*

An excellent biography of Dr. Bondurant has been written by E. B. Carmichael which appeared in the Alabama Journal of Medical Sciences in 1964, and I am indebted to him for many of the details which appear in this expanded biography.

Eugene DuBose Bondurant was born in Gallion, Alabama, on January 26, 1862. Both sides of Dr. Bondurant's family were of French Huguenot extraction. His father's ancestors can be traced back as far as 1750 when Jean Pierre Bondurant left Lyons, France and settled in Henrico County, Virginia. The Bondurants remained in Virginia until Eugene's father, James William Bondurant, originally from Andersonville, Virginia, moved to Perry County, Alabama in 1860.

During the Civil War, William enlisted in the Jefferson Davis Artillery and was promoted from Captain to Colonel, finally to become Chief of Artillery in Hood's Corps.

The ancestry of Eugene's mother, Evelyn (DuBose) can be traced back to Louis DuBosc (sic) who left Dieppe, France, with other Huguenots to settle in South Carolina. Several generations of the DuBose family (including Dr. Bondurant's great-great-great grandfather, Elias, who served as an officer in the Revolution and who later became a South Carolina Congressman) lived in South Carolina. Later, the DuBose family moved to Gallion, Alabama, where Dr. Bondurant's parents met and were married.

Dr. Bondurant's premedical education included attendance of the Avery School and Southern University in Greensburo, Alabama. He began his medical studies at the University of Virginia School of Medicine in 1882 and, along with 16 other classmates, graduated on June 27, 1883. His studies there were said to include anatomy, chemistry, medicine, physiology and surgery.

Dr. Bondurant continued his training in 1884 as Assistant Physician in the New York City Insane Hospital on Blackwell's Island, thus taking the first step in his life's work of treating mental illness. The next year he moved to Mobile, Alabama, and was appointed Assistant Physician of the Alabama Hospital. He did not stay in Mobile for long, however, since in that same year, 1885, he went to Tuscaloosa to be a physician at the Alabama Insane Hospital, where he remained until 1890.

As many American physicians did in those days, Dr. Bondurant spent the next two years in Heidelberg, Germany, and Vienna, Austria, learning the latest techniques in European medicine. He returned to Tuscaloosa around 1892 to be appointed Assistant Superintendent of the Alabama Insane Hospital. While on the staff at what is now Bryce Hospital, Dr. Bondurant was active in the Tuscaloosa County Medical Society and held various positions in the organization including the presidency in 1893.

In 1897 he moved back to Mobile to accept the Chair of Neurology and Psychiatry in the Medical Department of the University of Alabama, Mobile. He was also appointed Chairman of Microscopy at the same time, which in those days meant assuming responsibility for the teaching of Histology, Pathology and Bacteriology.

In the midst of his successful academic career, Dr. Bondurant undertook still another project. The following story appeared in the Mobile Daily Register on Sunday, September 25, 1898.

''Drs. Harry T. Inge and Eugene D. Bondurant will, at an early day, establish a large infirmary in Mobile. Both of these prominent physicians were reared in Greensburo, and their numerous friends here know they will succeed. Dr. Inge will do general practice and Dr. Bondurant, who has had a number of years experience at the Bryce Hospital at Tuskaloosa (sic), will make a specialty of nervous diseases.''

A deed filed in the Probate Court of Mobile County, September 23, 1898, states that the property for the sanitorium was purchased by Drs. Inge and Bondurant from Mrs. Catherine Bancroft, widow of Charles Bancroft, for the sum of $3500, $1200 of which was in cash. The property was located at 750 St. Michael Street in Mobile. It was a large, stately, three-story structure, pictures of which have survived and are exhibited in the Mobile Museum.

The hospital, named the Inge-Bondurant Sanitorium, served the Mobile area for approximately 30 years until its closing in 1928. Many interesting stories of the Sanitorium's history abound. Although there were three floors to the hospital, it had fewer than 50 beds. According to one of Dr. Bondurant's relatives, the hospital was never a profit-making enterprise, and it rarely operated at capacity, especially during the later years. One bright spot about the hospital was its school of nursing, which established an unparalleled reputation in the area. An ''Inge-Bondurant nurse'' was synonomous with a quality nurse.

The closing of the hospital was also an interesting story. In 1928 Dr. Bondurant, apparently seeing the depression on the horizon, rather abruptly called a meeting of the staff physicians. He announced that the hospital was to close ''tomorrow.'' This apparently caught some of the doctors by surprise.

The building was later used by the Mobile Welfare Department. Finally it was razed and replaced by a high-rise apartment building, Creighton Towers, which today stands on the site.

Dr. Bondurant was well known as a medical scientist and made significant contributions to the medical literature. His most famous paper, describing endemic neuritis (Beriberi) in the patients of the Alabama Insane Hospital, was the first description of a nutritional disease in the United States. This paper was read before the State Medical Association of Alabama in Montgomery in April, 1896, and he also reported his findings in the New York Medical Journal in 1897. His description of the disease was used by Osler in several editions of his famous textbook, *The Principles and Practice of Medicine*.

Besides writing scientific papers, Dr. Bondurant was also a contributing editor of *Sajou's Analytical Cyclopedia of Practical Medicine,* which is akin to our present day medical books on current therapies and practices. In the *Cyclopedia,* Dr. Bondurant contributed sections on such topics as chorea, beriberi, diseases of the peripheral nerves, rabies and tetanus.

In 1902 he delivered a paper entitled ''Some Therapeutic Uses of the X-ray,'' in which he described cures of several facial carcinomas not previously

helped by surgical intervention. He also described the use of x-ray in facial neuralgia and in intercostal neuralgia. He delivered several papers before the State Medical Association, including one on hookworm disease (1903).

He clearly described young children that he had seen with anemia, shortness of breath, and a ravenous appetite and correlated these symptoms with the discovery of hookworm eggs in their stools. He discussed the epidemiology of the disease as well as its treatment with thymol. In 1916 his paper discussing syphilis of the nervous system was written. Many of the consequences of the disease with respect to damage to the central nervous system were mentioned. He also emphasized the prevalence of syphilis which at that time was twenty percent of the population. He admonished his colleagues to recognize early symptoms and to treat the disease early because of the hopelessness of advanced cases.

Dr. Bondurant served as the President of the Mobile County Medical Society in 1904, and he delivered an eloquent welcoming address to the state medical society meeting which was held in Mobile that year. In his speech he hailed those present as ''soldiers waging an unending battle'' against disease and death. His love for Mobile was expressed in his address when he called the city ''a gem upon this golden southland seashore'' with ''traditions of Southern chivalry, courtesy and openhearted, unquestioning hospitality.''

In 1905 Dr. Bondurant also served as the President of the State Medical Association. His deep insight was seen in his recommendations to the association's meeting on April 17, 1906, when he asked that the physicians of Alabama:

1) abolish county boards of medical examiners because of the lack of standardization and quality;
2) recommend the building of a state institution for alcoholics and drug users;
3) begin a medical journal of the state association;
4) provide for a more equal distribution of delegates to the state convention.

He also praised the public health officials who, under Dr. Sanders, had helped stave off a yellow fever epidemic that had caused severe hardship in neighboring states but had spared Alabama.

Dr. Bondurant was conferred membership by many societies including the A.M.A., the American Psychiatric Association, the American Neurology Association, the Alabama State Medical Association, and both the Mobile and Tuscaloosa County Medical Societies. He was a member of the Kappa Alpha (Southern) social fraternity, the Mobile Country Club and the Alba Hunting and Fishing Club.

Dr. Bondurant's military record was a distinguished one as well. During World War I Dr. Bondurant served in the army and was appointed to the rank of Major on May 19, 1917, and to Lt. Colonel on October 31, 1918. He was appointed Commanding Officer of the General Hospital in Danville, N.Y. from 1917-1919. Members of his family report that he spent some time at Walter Reed Hospital as chief of Neurology taking care of soldiers suffering from shell shock. On August 14, 1924, he was elevated to Colonel, unassigned. He administered Selective Service for Mobile County during World War II, 1941-1945, as well.

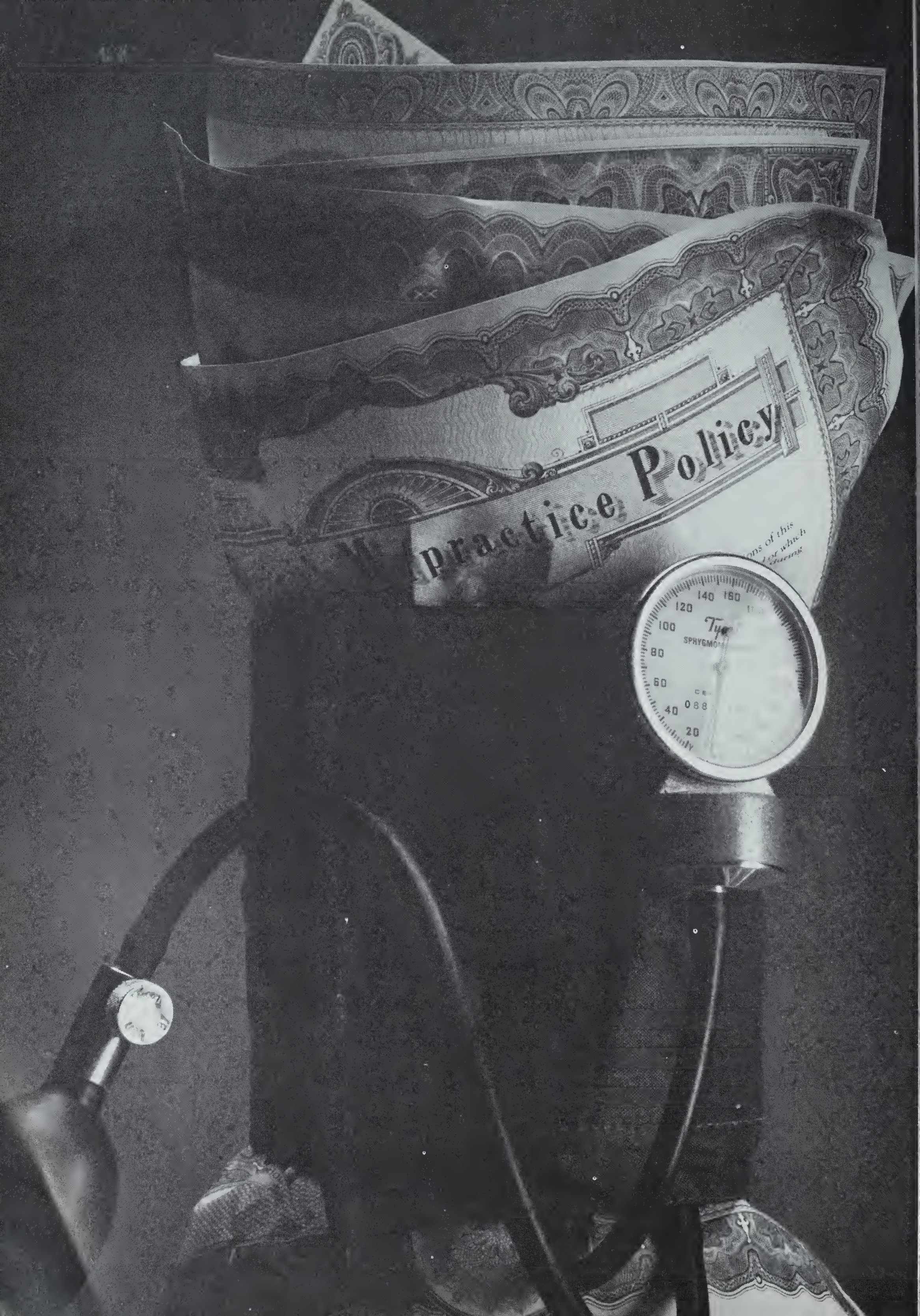
Dr. Bondurant's private practice of neurology and psychiatry was performed in several different locations. We have already discussed his association with Dr. Inge and the sanitorium. In 1918 he offered young Dr. Edward Sledge, Jr., $250 per month to come down from Plattsburg, New York to associate with him in private practice. Their first office was on Conti Street in downtown Mobile not far from the Cathedral. During the thirties they moved their office to the 300 block of Government Street.

The private life of Dr. Bondurant centered around his wife of 51 years, the former Miss Annie Laurie Prince of Mobile. She was the daughter of Major Sydney and Helen (Rhodes) Prince of Mobile. Their wedding day was April 19, 1899. People who knew the Bondurants well state that Dr. Bondurant and his wife were a study of opposites, who attracted and enjoyed the qualities that each one brought to their relationship.

Dr. Bondurant was universally described by those who knew him as a calm, quiet and reserved man who enjoyed fishing as well as telling his fishing stories to friends. His wife, on the other hand, was a small energetic woman who was apparently unequaled in Mobile social circles for sheer energy and for enjoying a social evening at a ball or dance.

The Bondurant residence still stands at 1109 Government Street. Besides fishing, Dr. Bondurant's hobbies included chess, astronomy, and raising grapefruits and pomegranates. He had a pair of English bulldogs which were his trademark with family and friends. The Bondurants moved out of that house as they grew older to the Windsor-Warwick Apartments farther down Government Street.

At age 88 Dr. Bondurant succumbed to his heart condition; he died on Christmas Day 1950. Mrs. Bondurant followed closely behind her husband and died in December of the next year. The two are buried side by side in Magnolia Cemetery in Mobile. ⊡


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Experience With Superficial Temporal-Middle Cerebral Artery Bypass Surgery for Stroke*

Morawetz, R. B.†
Zeiger, H. E.‡
Galbraith, J. G.§

Introduction

In the past the only symptomatic atheromatous lesions of the cerebral vascular tree amenable to surgical therapy were those in the neck.[1] However, a significant number of symptomatic patients were found to have complete carotid occlusion or a significant stenosis in an inaccessible location at the base of the skull or intracranially.[2] The development of microvascular surgery has provided a means of restoring adequate cerebral perfusion in these cases. This report documents our experience with 81 cases of superficial temporal-middle cerebral artery (STA-MCA) bypass surgery performed to improve cerebral circulation in these cases during the past five years.

Case Material

All patients were experiencing transient ischemic attacks (TIA's) or had suffered a mild or moderate stroke with some symptomatic residue. All patients had prior neurological screening and conventional medical therapy without relief of symptoms. Regional cerebral blood flow studies in many cases documented the need for improved cerebral perfusion. The angiographic findings are as follows in 81 cases:

Internal carotid occlusion unilateral 37 bilateral 8	45
Distal carotid stenosis alone	20
Distal carotid stenosis and contralateral carotid occlusion	9
Middle cerebral artery stenosis or occlusion	7

The age distribution ranged from 30 to 69 years. There was a striking preponderance of males (84%). Hypertension and diabetes mellitus singly or together were underlying disorders in almost every case.

Transient ischemic episodes which had not responded to medical therapy were present in 59 patients, and mild or moderate neurologic deficit was present in 45 (57%). Both TIA's and neurologic deficit were noted in 34 patients (43%), accounting for the overlapping of the above figures.

Procedure

Superficial temporal-middle cerebral artery bypass is carried out under general anesthesia. A scalp incision

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s made along the course of the anterior branch of the superficial temporal artery and the vessel is freed up by sharp dissection so that it is freely mobilized. A temporal craniectomy is then performed. The dura is opened over the sylvian fissure, exposing the sylvian branches of the middle cerebral artery. A suitable branch (1.5 to 2.0 mm. in diameter) is then selected for the anastomosis. Under microscopic control an end-to-side anastomosis of the superficial temporal artery to the middle cerebral branch is accomplished using 10-0 suture (Fig. 1). The usual operating time is three hours due to the meticulous nature of the microvascular anastomosis. Blood loss is minimal and the procedure is well tolerated by the patient.

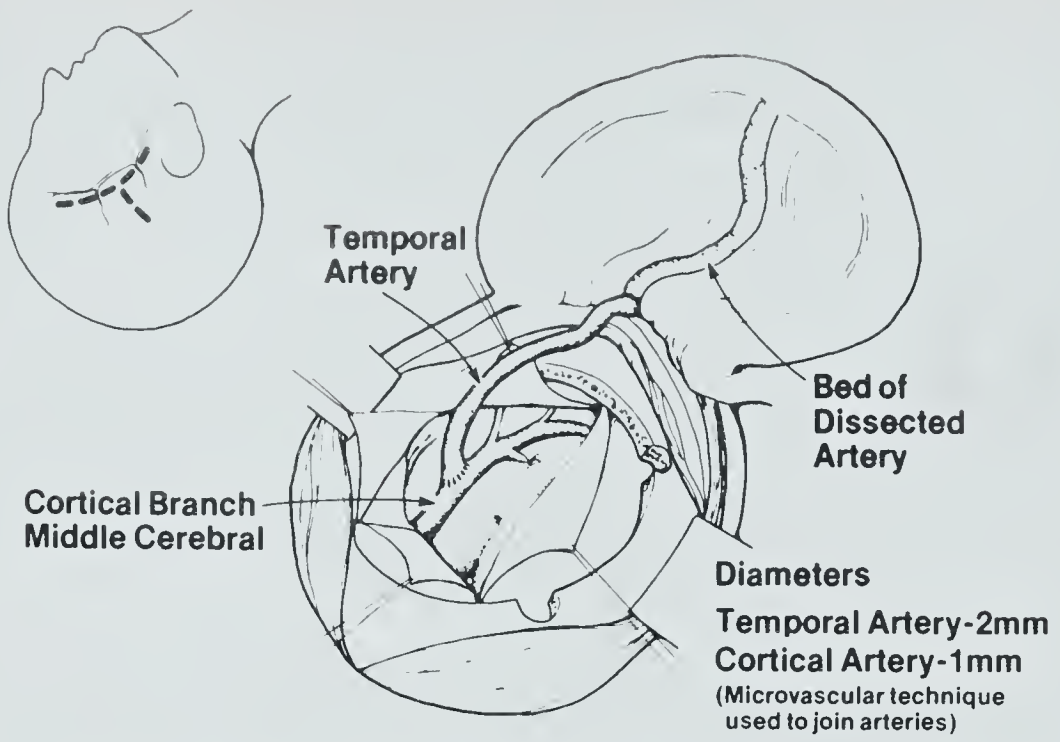


Figure 1. Diagram of the operation. Anastomosis of superficial temporal artery to a sylvian branch of middle cerebral artery.

Results

All patients whose postoperative followup period is more than one year (59 patients) have had periodic neurological assessment. The results are as follows:

59 cases — 1-4 years followup

Relieved of symptoms	44 or	76%
Improved but some residue	10	16%
No improvement in neurologic deficit	5	8%
Worse after operation	0	
Subsequent stroke	0	

Postoperative angiography has been performed in 90% of the 81 cases with the following findings:

Anastomosis fully patent	66
Anastomosis via narrow channels	4
Anastomosis occluded	2
Patency rate	97%

Complications have been few and relatively mild. They are listed as follows (for all 81 patients):

1 postoperative subdural clot, evacuated
2 intracerebral clot, resolved
1 postoperative myocardial infarction
0 surgical mortality

Distal (Inaccessible) Carotid Stenosis

Twenty patients, one fourth of our total STA-MCA operative experiences were symptomatic with severe carotid stenosis in its intracranial segment, chiefly at the siphon (Fig 2). The lesions were often bilateral, but with major involvement on the symptomatic side. In many instances the carotids in the neck were normal by angiography in this group. Since stenotic lesions at the base of the skull may be overlooked in the angiographic study, good visualization of the intracranial vessels is essential. This is especially true in the presence of TIA's or neurologic deficit and angiographically normal carotids in the neck.

Symptoms in this group consisted of TIA's in most cases, and a majority also manifested some degree of neurologic impairment, most often lateralized motor or sensory impairment and speech difficulty. Noteworthy also is the symptom of unilateral retro-orbital or temporal headache in about half of these patients.

In all 20 patients in this group the STA-MCA bypass was patent as demonstrated by postoperative angiography. Every patient manifested improvement after the procedure and 12 (60%) were asymptomatic. Fixed neurologic deficit persisted in 2 patients. Bilateral bypass was performed in 3 patients and all have been free of symptoms for three and two years respectively.

It is our impression that carotid stenosis intracranially is associated with more neurologic impairment and a greater tendency to progression of deficit than is carotid stenosis in the neck. Recent reports by Bodosi, et al.[3] and by Marzewski[4] support this impression. The latter author reports a 40% mortality in these cases within 5 years after diagnosis.

Discussion

Atheromatous involvement of the cerebrovascular tree usually involves the cervical segments primarily. However, in a large series of angiographically documented cases the following distribution of carotid lesions were found:

Joint study 1968 3,778 cases[2]

Proximal carotid stenosis	41%
Distal carotid stenosis	6%
Carotid occlusion	16%

Today the surgical management of carotid occlusive disease encompasses all three categories. Additionally, these lesions often occur concurrently, posing added questions concerning management. For example, a patient with unilateral carotid occlusion and high grade proximal internal carotid artery stenosis on the other side might well be a candidate for STA-MCA bypass on the occluded side before undertaking endarterectomy.

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The Physician's Sleep Glossary

Some common sleep laboratory terms

poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

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Summary

The development of extracranial-intracranial bypass surgery to its present state of satisfactory results with minimal risk provides additional protection to the brain against ischemic damage. The new channel of collateral flow is helpful in those cases where direct surgical correction of the stenotic process is not applicable, namely, carotid occlusion and intracranial carotid stenosis. Current experience indicates that this procedure is effective in relief of neurologic symptoms and significantly reduces the risk of future major stroke.

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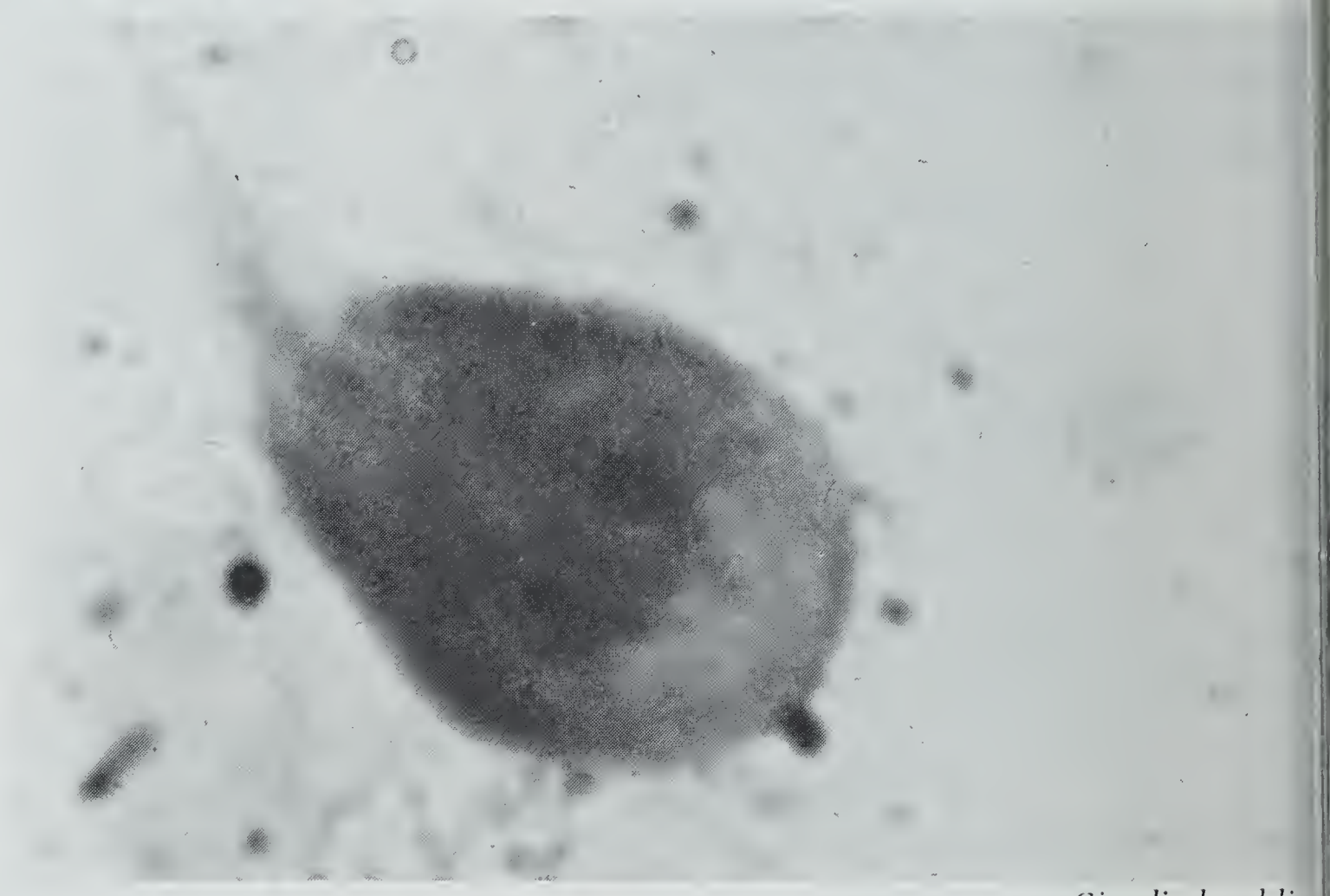
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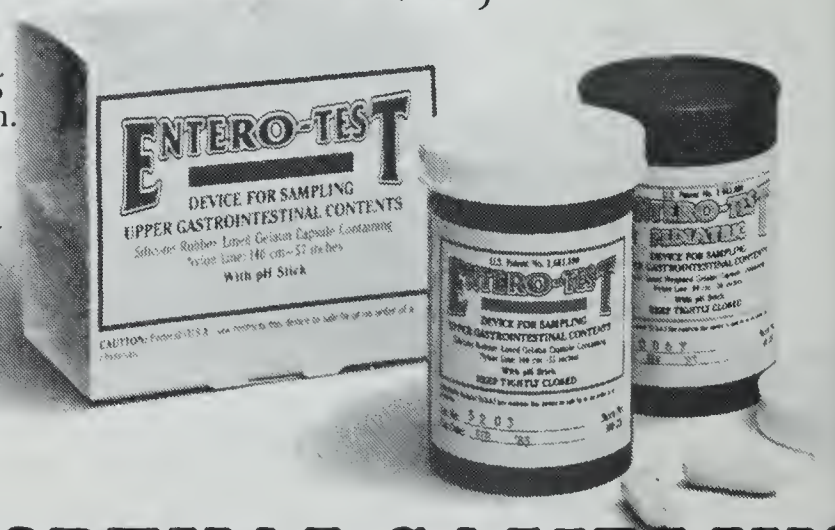


Giardia lamblia

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United States Department of Transportation Administrator Joan Claybrook says "We all are horrified when we read about child abuse. We are particularly offended when an adult harms an innocent and defenseless child. But we rarely articulate the same sense of outrage when we read a news account of a youngster killed or injured in an automobile crash.

"When there is a readily available and effective solution that could reduce deaths and injuries to children by 90%, perhaps we should recognize that failure to properly belt up children when riding in a motor vehicle is another form of child abuse. This sin of omission is just as deadly as an offensive act.

"Americans spend millions of dollars every year protecting themselves from the unexpected. We put locks on our doors to discourage burglers. We immunize our children to prevent disease. We visit the dentist to guard against tooth decay. Yet we do very little to protect against the constant threat of death or injury in an automobile crash."

Alabama at long last has passed legislation to protect our infants and toddlers. On April 20 we became the 12th state to pass mandatory automobile child restraint legislation. Last year, 722 Alabama infants and children under five were killed or injured in automobile accidents and nationally 10,000 children were killed or permanently disabled, physically or mentally. More children under five die from automobile accidents than from any other cause.

The American Academy of Pediatrics has been involved nationwide in an effort to pass mandatory child restraint legislation. Dr. Carden Johnston, chairman of the Alabama Chapter of the American Academy of Pediatrics, has led the effort in Alabama. Dr. Johnston, with the help of others, drew up legislation which was introduced and passed in the recently completed regular legislative session. Many individuals, agencies and groups supported Dr. Johnston's efforts, including the Medical Association of the State of Alabama and the Auxiliary to the Medical Association of the State of Alabama.

This legislation requires that any person transporting a child under the age of three use a "passenger restraint system meeting applicable federal safety standards." Some people resent this law as an infringement upon their personal freedom, but since children can't make this decision (to buckle or not), the purpose of the law is to protect the children. Although the law levies a $10 fine against violators, it is meant to be informative rather than punitive. Law enforcement officers are hoping for voluntary compliance and may use warning tickets for a while as one means of educating the public.

As AMASA begins its year child passenger safety will be among its most important priorities. Eileen Usman will be state chairman of this project. County auxiliaries throughout the state will be working to inform the people in their communities about the new law and education them on the importance of proper seat use.

The Jefferson County Medical Auxiliary, under the direction of Harriett Maloof, led the way by instituting a loaner program which has been in effect since January of 1981. This program now has made over 300 seats available to persons otherwise unable to afford one. Other county auxiliaries have programs in various stages of development.

You, the physician, can assist us in this vital work by making available to your patients free publications from the Alabama Department of Public Health, Bureau of Primary Prevention and by informing persons in your community of the importance of using car restraint.

Patty

President's Page

continued from page 5

California is one of the states out on the point in this engagement. In 1968 a typical obstetrician-gynecologist practicing in Southern California paid $1,600 per year for $1 million/$3 million occurrence coverage. By 1978, the annual premium had soared to $40,000, a 2,500% rise. Today the average ob-gyn specialist pays about $15,000 annually for claims-made coverage.

The climate in New York State caused the physician-owned company to request a 50% increase in premiums from the insurance commissioner. In Tennessee, physician payments for malpractice insurance have gone from $875,000 in 1974 to $16 million in 1980.

Expenses are projected to be greater than premium income at Mutual Assurance Society of Alabama in 1982. Another increase in premiums will be close behind.

The premium dollar is the tip of the iceberg that increases the cost of delivering care to the patients we serve. Certainly fees must be increased to cover professional liability premiums. Also overhead (electricity, employee salaries, etc.) continues while physicians are out of the office preparing a defense for these oftentimes frivolous suits. Courtroom time and trauma are inconsequential compared to ''wear and tear'' on a conscientious physician who has been unjustly sued. (I have seen very competent, sincere men almost destroyed during a protracted suit.)

However, the greatest burden is that of defensive medicine. It is impossible to estimate what percentage of the $280 billion to $300 billion health care bill for this country this year will be due to physicians practicing defensive medicine.

Hospital admissions, diagnostic tests, surgical procedures done, not because the physician's clinical judgment dictates, but because he or she feels that ''all the bases must be touched.'' The long shadow of the courtroom hangs heavy over the practice of American medicine today. I see no relief for this in the immediate future.

To counteract this alarming trend, physicians must reduce their exposure by practicing good medicine, keeping good records and maintaining excellent rapport with patients and their families. Being the patient's true advocate, in my opinion, is the best defense against a professional liability suit.

We must continue vigorously to defend suits that have little or no merit. While a total overhaul of the tort system is obviously needed, I do not think that is possible in contemporary society. The special interests of an entire industry — the courts, the bailiffs, the judges, the plaintiffs, the plaintiff and defense attorneys, the plaintiff's expert witnesses — as well as the ''conduit'' insurance companies are threatened. Significant change in the system is therefore unlikely.

We can however, make legislative attempts to find ways to make it less possible and more difficult for a frivolous suit to be filed, while at the same time not compromising the patients' rights to seek compensation for legitimate grievances. A legislative definition of ''expert witness'' is badly needed and probably attainable. Pre-file screening panels served by regional pools of qualified experts are also attainable. In Montana, for example, they have been credited with reducing by 50% the number of professional liability cases that go to the courts.

We have no real problems in American medicine today, only challenges and opportunities. The professional liability challenge must be met head-on. Working together, the physicians of this country can, as Shakespeare put it, ''out of this nettle, danger, pluck this flower, safety.''



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THE PATIENT THINKS HE HAS HEART TROUBLE...





...YOU KNOW IT'S REALLY ANXIETY SYMPTOMS

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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation. The clearance of Valium and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.
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EXECUTIVE DIRECTOR

Medicine's Global Village



S. Lon Conner
Executive Director, MASA

We hear a lot these days about the ramifications of the ''global village'' concept, wherein all of mankind is as close today as next-door neighbors were a century ago. Because of modern transportation and communication, the planet has shrunk, they say.

However that may be, of one thing I am sure: the events and circumstances affecting Alabama physicians have virtually no geographic boundaries. Just as Alabama weather the other day was attributed to a volcano eruption in Mexico, so did the Board of Censors react to a seismic event about the same distance away in time and space.

The U.S. Supreme Court in Washington, sitting in judgment on physicians in Maricopa County, Arizona, concluded 4-3 that the medical society there was in *per se* violation of the Sherman Act in setting up maximum fees for physicians participating in a foundation insurance plan.

This is horizontal price fixing, the court majority said, and hardly distinguishable in effect on market freedom from minimum price-fixing. Accordingly, the Board of Censors, sitting in Montgomery, Alabama, thousands of miles from Maricopa County, suspended all peer review activities the very next week after the decision was announced in Washington.

To be sure, the case turned on some facts similar to peer review, but the cases cited by the court in reaching a judgment admittedly outside its area of expertise illustrate the global village connection of medicine to commercial affairs. The court relied heavily on decisions involving:

A whiskey importer and distributor (Seagram); engineers; lawyers; two oil companies (Socony-Vacuum and Standard of New Jersey); two cable television companies; a traffic association; a railroad; the Chicago Board of Trade; a trucking company (White); and even rock & roll *(Broadcast Music, Inc., v. CBS).*

In fact, the court cited precedents from virtually every field of American endeavor, it seems, BUT medicine, in its pains to support the conclusion that doctors in Maricopa County were trying to distort, restrain or limit market forces.

If this fails to make the point that just about everything that goes on nowadays affects medicine, consider the possible upscaling of a relatively new form of imaging — magnetic resonance, I think it is called — into an exorbitantly expensive possible successor to, or complement to, the CAT scanner.

Although magnetic resonance imaging is still over the horizon, the lag time between laboratory refinement and commercial marketing has shrunken. I wouldn't be surprised if some of you have already been approached by an advance scout for one of the companies producing what may become the next big public controversy over ''expensive high-tech medicine.''

The war in the Middle East has an obvious effect on the national economy in this country, if for no other reason than reinforcing the argument for more diversion of national resources into defense spending, thus subtracting those same sums from future health care objectives.

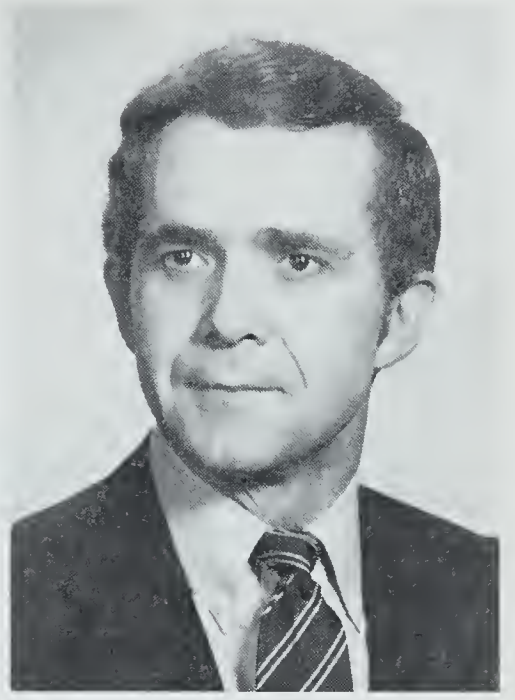
As physicians, you might think the war between Britain and Argentina over the Falklands couldn't possibly affect American health care, but consider this: under previous agreements between the United States and Britain, this country moved in to fill the NATO submarine gap in the Eastern Atlantic created by the deployment of British subs to the South Atlantic. Our crews have been worked to exhaustion, our equipment extended to the breaking point.

Now that the shooting has subsided in the Falklands, military analysts are saying that as much as one half of the British fleet could be diverted indefinitely to patrolling the southern Atlantic — meaning the United States must plug the British commitment to the defense of the Western World. And that may well mean more U.S. naval personnel and ships than anticipated in the Reagan budget. The money must come from somewhere, but there is already a huge budget deficit. Obviously some of our future resources may be co-opted from national priorities in health care.

I hope I have not strayed too far — but that was precisely the point — in arguing that modern medicine is affected by almost everything that goes on in the world of science, commerce, global politics, diplomacy, war and even, it seems, rock & roll.

Lon

PRESIDENT'S PAGE



Ronald E. Henderson, M.D.
President, MASA

The Closing of the Ring

Many physicians have the idea that, should organized medicine win its battle in Congress against the Federal Trade Commission, the anti-trust beast will have been leashed. Alas, this is not the case: anti-trust actions come from other sides as well.

To review:

Earlier this year, the AMA lost its seven-year court fight with the FTC when, by a 4-4 tie vote, the U.S. Supreme Court let stand a federal appeals court decision upholding the FTC intervention against AMA in what was plainly a case designed to test the waters of what had always been an exemption from anti-trust action — the learned, or state regulated, professions.

The *Goldfarb* decision of 1975, an action against the Virginia Bar Association, had paved the way for the FTC's adventuring against organized medicine. In it, the Supreme Court held that there is neither a specific exemption for the professions in the Sherman Act nor any legislative history to indicate that the professions were not intended to be covered by the terms "trade or commerce."

Here is the watershed of the confusion in the minds of many physicians. The court did say that anti-trust action applies to the learned professions under the Sherman and Clayton Acts, but it did not address the FTC question. That was not an issue before the court.

The FTC was established as a watchdog agency over business and industry, one intended by Congress to have special operational expertise in areas of heavy industry and vital commerce. The professions were exempt as Congress drafted the law long ago.

But AMA has never claimed physicians, individually or collectively, are exempt under the general anti-trust statutes, Sherman and Clayton. In fact, the AMA has repeatedly argued through counsel that the public is *more than adequately protected by these statutes should the medical profession run counter to the public interest.*

And *Goldfarb* did leave the famous Footnote 17, which seemed to say that the professions should be treated differently than ordinary commerce. The professions took hope that their services were not, after all, to be treated on a footing with canned tripe and fatback.

The hope lasted for three years. Then came the 1978 case of *National Society of Professional Engineers v. United States,* wherein the Supreme Court examined an ethical rule that prohibited members from submitting competitive bids for engineering services. That was a *per se* violation of anti-trust laws, the court said, and it mattered not one whit that the engineers were able to show the rule protected the public from inferior services. That argument, the court said, should be addressed to Congress.

So as early as 1978 the court was moving in the direction it took just a few weeks ago in the case of *Arizona v. Maricopa County Medical Society* insofar as the application of the Sherman and/or Clayton Acts to the professions is concerned.

Maricopa County physicians defended their insurance reimbursement arrangement, which enlisted only those physicians willing to accept certain maximum fees, as a way of protecting the public from excessive charges and, also, as a cost containment measure. The Court had two ways to look at the issue under prevailing law: 1. *per se;* or 2. "the rule or reason," which looks to the facts of the case to determine if there had indeed been any price fixing.

The court elected the first and harshest conclusion: Maricopa County was in *per se* violation. That is, the arrangement was illegal on its face. That very month, the MASA Board of Censors suspended all peer review of physicians' fees in Alabama, on the advice of General Counsel Wendell Morgan, who warned that *Maricopa* was too close for comfort.

If a state or an individual can proceed under Sherman and Clayton, you may ask, and even if a single disgruntled individual can file suit under these federal statutes as well as under state anti-trust laws (which we have in Alabama, by the way), why worry about the FTC?

Why indeed! It does appear that the federal courts, led by the Supreme Court, is moving toward a view of

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Public Attitudes Toward Health Care in Alabama

Patrick R. Cotter
Capstone Poll
Center for Administrative and Policy Studies
University of Alabama

Commissioned by MASA's Board of Censors

Introduction

The development of solutions to some of the problems currently faced by physicians is aided by knowing how the public feels about health care issues and providers. This study reports the results of a survey of Alabama citizens' attitudes about health care.

In the study several health care issues are examined. Specifically, citizens' perceptions regarding the costs, quality and availability of health care in Alabama are examined. Also examined are Alabamians' attitudes and beliefs regarding medical malpractice suits. Additionally, the factors which individuals consider in selecting a family or primary doctor are investigated. Finally, several other health care issues are briefly explored.

The survey, which is the basis for the data used in this report, was sponsored by the Medical Association of the State of Alabama and conducted by the Capstone Poll at the University of Alabama. In the survey, telephone interviews were completed with a random sample of 523 adult Alabama citizens. A sample of this size has an error margin of ± 4.5 percent. A method of random digit dialing was used in drawing the sample. The interviews were conducted between April 27 and May 16, 1982.

Computer generated tables are available in which the health care questions in the survey are cross-tabulated against socio-demographic and political characteristics of the respondents. Readers interested in the relationships between health care attitudes and the characteristics of respondents may examine these tables at the Office of Public Affairs, Medical Association of the State of Alabama. The main findings of the analysis presented in the tables are included in this report.

Health Care in Alabama

Citizens' perceptions regarding health care in Alabama were examined in several ways in the survey. First, respondents were asked, "What do you think is the most important health care problem facing Alabama at the present time?" Many respondents (about 40 percent of the entire sample) did not answer this question. This high nonresponse rate indicates that many individuals either do not perceive any major problems in the area of health care, or do not feel very informed about this issue.

Of those answering the question, most mentioned some specific disease or health problem (Table 1). About 18 percent of those responding said that high costs were the major health care problem in the state. About one in ten of those responding said that the quality of health care was the major problem, while 5 percent said the most important problem was the inaccessibility and/or inadequate supply of health care providers. The Capstone Poll survey includes a number of additional questions which allow a closer examination of the public's attitudes about the cost, quality and availability of health care in Alabama.

Cost of Health Care

The public's concern about the cost of health care is shown by the finding that one-half of the respondents

say that they are not receiving all the health care they need because of the high cost of getting that care (Table 2). Lower income, less educated and black respondents are more likely than others to say that they do not get all the health care they need. Also those in lower status occupations and those who think their own health is not good tend to say that high costs prevents them from getting all the health care they need.

Respondents believe that the blame for high health care costs is shared by many (Table 3). The national government is given "a lot" of the blame for high health care costs by 69 percent of the respondents. About 60 percent of the public also assigns a lot of the blame for high costs to hospital administrators, doctors and drug companies. Half the public say that insurance companies bear a lot of the blame for high health care costs. The public is least likely to blame themselves for increasing health care costs. Only about 45 percent of the respondents say that "patients who are willing to pay any cost instead of shopping around" bear a lot of the blame for high health care costs.

TABLE 1

"What do you think is the most important health care problem facing Alabama at the present time?"	
Cost of health care	18%
Cancer	16
Quality of health care	9
Heart disease	8
VD	6
Accessibility/supply of health care	5
Lack of balanced diet	4
Drug abuse	3
Children's diseases	2
Mental health	2
Air pollution	2
Cigarette smoking	2
Overweight	2
Other specific diseases	9
Other	12
Total	100%
N	300*

* Missing data deleted in this and following tables. Percentages have been rounded off and may not add up to 100%.

The results shown in Table 4 give further indication that the public believes that the health care industry is itself responsible for high medical costs. About 70 percent of the respondents believe that doctors are

TABLE 2

"The high cost prevents me from receiving all the health care I need."	
Strongly agree	6%
Agree	44
Disagree	47
Strongly disagree	2
Total	100%
N	485

TABLE 3

"The cost of health care has increased greatly in recent years. Would you place a lot of blame or not much blame for this increase on —

	A Lot	*Not Much*	*Total*	*N*
National government	69%	31%	100%	436
Hospital administrators	62	38	100	454
Doctors	59	41	100	489
Drug companies	58	42	100	467
Insurance companies	52	48	100	466
Patients willing to pay any cost instead of shopping around	45	55	100	440

overpaid. Over half (55 percent) of the respondents agree that doctors are "more concerned about making money than they are with the welfare of their patients." A large segment of the sample (75 percent) also believe that duplication of services is a major cause of high health care costs.

When asked about ways to reduce high costs (Table 5) the public indicates a willingness to accept some, but not all, proposed changes in the way health care is provided. About two-thirds of the respondents say that they would be willing to have their "routine illness treated by a nurse or doctor's assistant rather than by a doctor." About half would go to a clinic rather than to their own private doctor and a similar percentage are willing to pay a higher deductible on their medical insurance. However, a majority of the public is not willing to (1) limit people's access to high technology equipment, (2) give up their right to sue for malpractice, or (3) wait a longer time in order to get an appointment with a doctor. Higher income and younger respondents are the most willing to use a nurse or doctor's assistant. Lower income, less educated and older respondents are the most willing to limit people's access to high technology equipment. Older respondents are also more willing than younger respondents to waive their right to sue for malpractice.

A majority of respondents endorse shopping around for cheap insurance, even if the insurance plans do not cover all medical costs (Table 6). However, about 43 percent of the public favors full insurance coverage of medical fees even if this increases the cost of health care.

While saying that the national government shares a lot of the blame for high costs, a large portion of the public also believes that the government has an obligation to provide individuals with the health care they need at a low cost (Table 7). About 60 percent of the respondents also feel that the national government should establish a universal national health insurance plan. Democratic party identifiers, less educated and lower income respondents and blacks are most in favor of the national government providing health care and having a national health insurance program. Addi-

TABLE 4

"Do you strongly agree, agree, disagree, or strongly disagree with each of the following statements?"

	Strongly Agree	*Agree*	*Disagree*	*Strongly Disagree*	*Total*	*N*
Most doctors are overpaid	14%	57%	26%	2%	100%	484
Most doctors in this state are more concerned about making money than they are with the welfare of their patients.	10	45	43	2	100	464
The cost of health care would be lower if there was not so much duplication of services in this state.	6	69	24	1	100	430

TABLE 5

Now I would like to ask you a few questions about some possible ways to reduce the cost of health care. If it would reduce the cost of health care would you be willing —

	Yes	*No*	*Total*	*N*
to have your routine illnesses treated by a nurse or doctor's assistant rather than by a doctor?	65%	35%	100%	505
To go to a clinic where you would be assigned an available doctor instead of going to see your own private doctor?	52	48	100	498
to pay a higher deductible — that is, pay more of your medical bills before the insurance starts to pay?	48	52	100	467
to limit the opportunities for people to use expensive modern technology?	35	65	100	443
to give up the right to sue for possible malpractice?	33	66	100	464
to wait a longer time in order to get an appointment to see a doctor?	30	70	100	480

TABLE 6

"Some people think that it is best to have all of a person's medical bills covered by insurance, even if it increases total medical costs. Other people believe that medical costs can be significantly reduced if consumers are encouraged to shop around for cheaper plans that might not cover every dollar of a person's medical bills. Which would you prefer — full coverage even though it is very expensive, or shopping around for cheaper coverage even if it is limited?"

Cheaper and limited	56%
Full and expensive	43
Total	100%
N	484

tionally, the public endorses another activity which some think may reduce the cost of health care. About 70 percent of the respondents think that "physicians should advertise the amounts they charge for their services."

Quality and Availability of Health Care

Alabamians have a high regard for the doctors in this state, and especially for their own personal doctors (Table 8). About 90 percent of the respondents say that doctors in Alabama generally keep up with the developments in their profession and that most physicians are ethical and responsible people. About the same percent say that they have a great deal of confidence in their doctor. About 85 percent of the respondents "disagree" or "strongly disagree" with the statement that "most doctors in this state don't really know what they

TABLE 7

Do you strongly agree, agree, disagree or strongly disagree with each of the following statements?

	Strongly Agree	*Agree*	*Disagree*	*Strongly Disagree*	*Total*	*N*
The national government ought to help people get doctors and hospital care at low cost.	9%	64%	23%	4%	100%	482
The national government should establish a universal national health insurance plan.	6	53	30	10	100	452
Physicians should advertise the amount they charge for different services.	6	66	28	1	100	471

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The Physician's Sleep Glossary

Some common sleep laboratory terms

poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

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are doing.'' More educated and higher income respondents are the most likely to disagree with the statement. Also, the better an individual rates his/her own health, the more likely they are to disagree with the statement.

In at least one way respondents have more positive feelings about their own doctors than doctors in general. About 88 percent of the respondents say that ''my doctor adequately explains my medical problems to me.'' However, about three-fourths of the respondents say that ''physicians do not spend enough time helping patients understand their illnesses.''

While believing that most individuals get adequate care, the public also generally favors policies that would insure the quality of care that individuals receive (Table 9). Specifically, about 54 percent of the respondents believe that the national government should have greater control over the care provided by doctors. Democratic party identifiers, less educated and lower income respondents and blacks are the most in favor of the national government having this power.

The public perceives some problems regarding the availability of health care in the state. One reason for this is that the public perceives that there is an inadequate supply of health care providers. About 56 percent of the respondents say that ''there is a serious shortage of doctors in this state'' (Table 10).

Attitudes About Medical Malpractice

One problem encountered by the medical profession in recent years is an increase in the number of malpractice suits. As shown in Table 11, respondents most frequently say that the primary cause of this increase is the performance of doctors. Specifically, 21 percent of the respondents say that the increase in medical malpractice suits is due to incompetence or negligence on the part of doctors. Another 16 percent say that the increasing number of court cases is due to doctors being too busy to give good care, or doctors not caring about their patients. Table 12 shows that slightly less than half of those who answered the question say that ''in most malpractice suits the physician is actually negligent or in the wrong.''

Doctors are not the only perceived cause for the rise in medical malpractice suits. Greed, and specifically greed on the part of lawyers and patients, is also frequently mentioned by respondents as a cause for the rise in malpractice cases. Respondents also believe that changes in court procedures and changing social conditions, which makes it more acceptable to sue, have also contributed to the rise in malpractice lawsuits. A greater awareness on the part of the public that they can, and may have to, sue doctors is mentioned by 6 percent of the respondents as a reason for the rise in malpractice suits.

As shown in Table 13, respondents are likely to initiate a malpractice suit if they think a doctor made a serious mistake. While only about one-fifth of the re-

TABLE 8

"Do you strongly agree, agree, disagree, or strongly disagree with each of the following statements?"

	Strongly Agree	*Agree*	*Disagree*	*Strongly Disagree*	*Total*	*N*
The doctors in this state generally keep up with developments in their profession.	6%	83%	11%	0%	100%	454
Most physicians are ethical and responsible people.	7	85	8	0	100	485
I have a great deal of confidence in my doctor.	18	74	7	0	100	490
Most doctors in this state don't really know what they are doing.	0	14	74	12	100	465
My physician adequately explains my medical problems to me.	10	78	12	1	100	493
Physicians do not spend enough time helping patients understand their illness.	9	66	26	0	100	477

TABLE 9

"The national government should have more control over the quality of care provided by doctors in this state."

Strongly agree	4%
Agree	50
Disagree	42
Strongly disagree	4
Total	100%
N	466

spondents are likely to sue if they believe that their doctor mistakenly failed to find a cure for their illness, about two-thirds are likely to sue if they believe that a mistake by their doctor resulted in a "serious medical problem." Similarly, about 67 percent of the public are likely to sue if they believe that a spouse or parent "died as a result of a mistake by a doctor." Younger respondents are more likely to sue than older respondents in the event of a death or serious medical problem.

TABLE 10

"There is a serious shortage of doctors in this state."

Strongly agree	7%
Agree	49
Disagree	42
Strongly disagree	2
Total	100%
N	450

Selection of a Primary or Family Doctor

About 84 percent of the respondents say that they have a primary or family doctor. Older respondents and those describing their health as poor are the most likely to have a family doctor.

The Capstone Poll survey examined the factors which individuals consider in selecting a family doctor in two ways. First, respondents with a primary or

TABLE 11

"In recent years the number of medical malpractice law suits has increased. What do you think are the primary causes for this increase in malpractice law suits?"

Incompetance, negligence on part of doctor	21%
Patients greed	16
Doctors too busy, do not care	16
Social conditions — willingness to sue	9
Greed (unspecified)	8
Public awareness	6
Lawyer greed	5
Misunderstanding	5
Court procedures, outcomes	3
Doctor-patient relations	3
High cost of health care	2
Negligence on part of hospital, nurses, technicians	2
Malpractice insurance	1
Doctor's greed	1
Other	2
Total	100%
N	345

family doctor were asked, "what was the most important reason for choosing this doctor?" The results of this question (Table 14) suggest that in selecting a family doctor individuals are primarily concerned with the quality of care that doctor will give them.

Individuals learn about the quality of a doctor's care in several ways. First, individuals learn about doctors from other people. About 30 percent of those with a

TABLE 12

"In most malpractice suits, the physician is actually negligent or in the wrong."

Strongly agree	2%
Agree	43
Disagree	52
Strongly disagree	3
Total	100%
N	386

TABLE 13

"How likely is it that you would file a malpractice suit in the following circumstances?"

	Very Likely	*Likely*	*Not Very Likely*	*Not At All Likely*	*Total*	*N*
You believe that your doctor mistakenly failed to find a cure for your illness.	6%	16%	58%	20%	100%	477
You believe that you developed serious medical problems as a result of a mistake by your doctor.	17	49	27	7	100	489
You believe that your spouse or your parents died as a result of a mistake by your doctor.	26	41	26	7	100	484

family doctor said that their choice was based on a recommendation by such people as a family member, a friend or another doctor. Individuals also learn about the quality of a doctor through their personal experiences. About 26 percent of those answering the question said their decision was based on their own experience with the doctor. A doctor's personality may be an indicator of the type of care he/she provides. About 7 percent of the respondents with a family doctor say that their decision was based on the doctor's personality.

About 19 percent say that their choice of a family doctor was based on a personal relationship with the physician. Here people refer to a doctor being a personal or family friend, a member of the family or a long-time family doctor. It is likely that choices based on personal relationships reflect a respondent's confidence about a doctor's ability.

The accessibility of a physician and the amount he/she charges for different services appear to have little influence on selection of a family physician. About 11 percent of those with a family doctor say that their decision was based on such things as office hours or the location of the doctor's office. Only 1 percent said their choice was based on the amount the doctor charged for his/her services. This suggests that either (1) individuals do not have the information necessary to select

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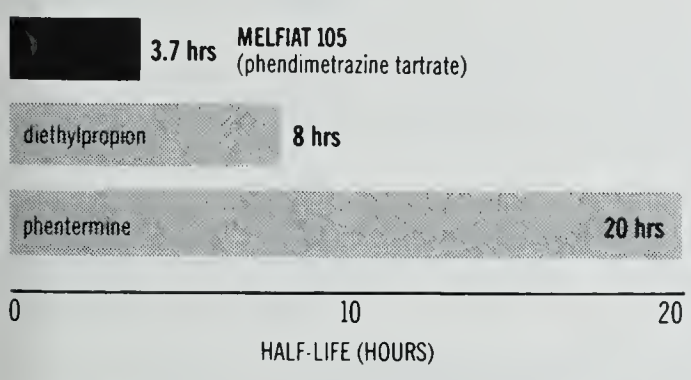


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MELFIAT® 105 UNICELLES® Ⓒ III
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WARNINGS: Tolerance to the anorectic effect usually develops within a few weeks. When this occurs, the recommended dose should be discontinued. Phendimetrazine tartrate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly.

Drug Dependence: Phendimetrazine tartrate is related chemically and pharmacologically to the amphetamines. Amphetamines and related stimulant drugs have been extensively abused, and the possibility of abuse of phendimetrazine tartrate should be kept in mind when evaluating the desirability of including a drug as part of a weight-reduction program. Abuse of amphetamines and related drugs may be associated with intense psychological dependence and severe social dysfunction. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high-dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG, manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxication is psychosis, often clinically indistinguishable from schizophrenia.

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USAGE IN CHILDREN: Phendimetrazine tartrate is not recommended for use in children under 12 years of age.

PRECAUTION: Caution is to be exercised in prescribing phendimetrazine tartrate for patients with even mild hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of phendimetrazine tartrate and the concomitant dietary regimen. Phendimetrazine tartrate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage.

ADVERSE REACTIONS: Cardiovascular: Palpitation, tachycardia, elevation of blood pressure.
Central Nervous System: Overstimulation, restlessness, dizziness, insomnia, euphoria, dysphoria, tremor, headache; rarely psychotic episodes at recommended doses.
Gastrointestinal: Dryness of the mouth, unpleasant taste, diarrhea, constipation, other gastrointestinal disturbances.
Allergic: Urticaria.
Endocrine: Impotence, changes in libido.

OVERDOSAGE: Manifestations of acute overdosage with phendimetrazine tartrate include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states.
Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma. Management of acute phendimetrazine tartrate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Acidification of the urine increases phendimetrazine tartrate excretion. Intravenous phentolamine (Regitine) has been suggested for possible acute, severe hypertension, if this complicates phendimetrazine tartrate overdosage.

DOSAGE AND ADMINISTRATION: Since Melfiat® 105 (phendimetrazine tartrate) 105 mg is a sustained-release dosage form, limit to one sustained-release capsule in the morning. Melfiat® 105 (phendimetrazine tartrate) is not recommended for use in children under 12 years of age.

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TABLE 14

"Thinking about your primary doctor or family doctor, what was the most important reason for choosing this doctor?	
Recommendation by family, friend, another doctor, etc.	30%
Experience with doctor	26
Personal relation with doctor (family friend, long time family doctor, etc.)	19
Accessibility of doctor (office hours, location, etc.)	11
Personality/attitude of doctor	7
Costs	1
Other	6
Total	100%
N	389

a doctor on the basis of costs, or (2) individuals give greater emphasis to considerations other than cost in choosing a family doctor.

The Capstone Poll survey also asked a series of questions about how important different factors would be if they had to choose a (new) family doctor. The results of these questions (Table 15) again show that the selection of a family doctor is primarily based on the quality of care an individual believes he/she will receive from a physician.

Every respondent says that the willingness of a doctor to talk with them about their illness is a "very important" or "important" consideration in their selection of a family doctor. Younger and higher income respondents are especially concerned about this aspect of their doctor. About 85 percent of the respondents say that a doctor's personality and appearance will have a very important or important impact on their selection of a family doctor.

Recommendations are also an important consideration for individuals in selection of a family doctor. About 90 percent of the respondents say that a recommendation by another physician would have a major impact on their choice of a family doctor. Recommendations by friends and/or relatives are an important consideration for 85 percent of the respondents. About 80 percent say that a recommendation by a hospital would influence their decision and 90 percent say that a doctor's having access to a particular hospital is an important or very important consideration in their selection of a family physican. About 69 percent say that a recommendation by a medical society would influence their choice of a family doctor.

Respondents give somewhat less emphasis to the location of a doctor's office (66 percent) or to whether a doctor has weekend or evening office hours (66 percent). However about 9 in 10 respondents say that the length of time it takes to get an appointment would have a major impact on their selection of a doctor.

"How much a doctor charges" is said to be an important or very important consideration for selecting a family physician by about three-fourths of the respondents. About the same percent say that the "number of years of experience a doctor has" would influence their decision. Lower income respondents give a greater

TABLE 15

"Now suppose you had to choose a (new) primary or family doctor. How important would each of the following be in your decision?"

	Very Important	*Important*	*Not Very Important*	*Not At All Important*	*Total*	*N*
Willingness of the doctor to talk with you about your illness	59%	40%	0%	0%	100%	515
Recommendation by another physician	44	49	5	2	100	516
The length of time it takes to get an appointment	35	53	11	1	100	503
The doctor's access to a hospital you want	34	56	9	2	100	507
Recommendation by a friend or relative	29	57	12	2	100	514
Doctor's personality and appearance	29	55	14	2	100	513
Recommendation by a hospital	16	63	17	3	100	508
How much the doctor charges	27	48	22	3	100	510
The number of years of experience the doctor has	24	50	24	3	100	503
Recommendation by a medical society	24	45	26	5	100	483
Location of a doctor's office	18	48	29	5	100	512
Whether the doctor has weekend and evening office hours	14	52	30	4	100	504
A doctor's involvement in civic organizations	5	32	46	17	100	484
Listing in the Yellow Pages or some other directory of doctors	6	24	51	19	100	502

emphasis to a doctor's fees than do others.

The least important considerations are a physician's involvement in civic organizations (37 percent) and a doctor's listing in the "yellow pages or some other directory of doctors" (30 percent). Lower income and black respondents give greater weight to civic activities and listing in medical directories than do others. Less educated respondents also rate listings in medical directories more highly than do others.

Other Health Care Issues

The Capstone Poll survey contained several questions which asked about other health care issues. The results of these questions are presented in Table 16.

Physicians' Reactions to a Patient's Terminal Illness

Most respondents would like their physician to tell them if they have a terminal illness. Only 12 percent of the respondents do not want to be told of their terminal illness. More educated, higher income and younger respondents express the greatest support for doctors telling patients of their terminal illness. Also, the better an individual describes his/her own health, the more likely he or she is to favor physicians telling patients that they have terminal illness.

Most respondents also believe that seriously ill patients should have the option to be allowed to die. About 80 percent of the respondents support the concept of the "right to die."

Information From Doctors

Previously it was reported that most people think doctors (though not necessarily their own doctor) do not take enough time to tell patients about their illnesses. Consequently it is not surprising that most respondents would like to receive more information from doctors explaining their treatment. Specifically, about 89 percent of the respondents say that they would like doctors to give them a brochure explaining the type of treatment they are receiving.

Most respondents also say that they would seek out information from doctors if they felt it was needed. About 83 percent of the respondents say that they would seek a second opinion from another doctor before undergoing surgery.

Health Care Behavior

About three-quarters of the respondents say that they have an annual physical checkup. Slightly over half the respondents say that they exercise at least twice a week. Younger respondents and those describing their own health as good are the most likely to exercise. About two-thirds of the respondents say that they weigh about what their doctors say they should. Individuals who say they are in good health are more likely to say that they weigh about the right amount.

Information About Health Care

Over 70 percent of the respondents say that they often watch television programs which discuss health care problems. When asked where they receive most of their information about health care (Table 17), about 28 percent say television, about 21 percent say magazines, and 16 percent mention friends or acquaintances. Additionally, 11 percent receive most of their health information from newspapers and 14 percent say that

TABLE 16

"Do you strongly agree, agree, disagree, or strongly disagree with the following statements?"

	Strongly Agree	*Agree*	*Disagree*	*Strongly Disagree*	*Total*	*N*
If I have a terminal illness, I would not want my physician to tell me.	**2%**	**10%**	**67%**	**20%**	**100%**	**486**
I believe that a very ill person should be allowed to die when there is no chance of recovering.	**21**	**58**	**19**	**2**	**100**	**446**
When I am ill, I wish my doctor had brochures explaining the type of treatment I was receiving.	**12**	**77**	**10**	**0**	**100**	**488**
I would seek a second opinion from another doctor before undergoing surgery.	**21**	**62**	**17**	**1**	**100**	**487**
I generally have a physical checkup at least once a year.	**15**	**60**	**23**	**2**	**100**	**499**
I generally do exercises like push-ups or sit-ups or jogging at least twice a week.	**11**	**43**	**43**	**3**	**100**	**495**
I weigh about what my doctor says I should.	**7**	**61**	**30**	**2**	**100**	**487**
I often watch TV programs that discuss health problems.	**8**	**64**	**25**	**2**	**100**	**498**

TABLE 17

"Where do you get most of your information about health care and medicine?"

Television	28%
Magazines	21
Friends and acquaintances	16
Medical providers (doctors, nurses, etc.)	14
Newspapers	11
Medical books	4
Radio	2
Other	4
Total	100%
N	N

their primary source of information is health care providers such as doctors and nurses.

Own Health

About 31 percent of the respondents say that they are in excellent health (Table 18). About 42 percent say that their health is good and 22 percent say it is fair. Only 5 percent of the respondents say that their health is poor. Most respondents say that their health has not changed over the last 5 years. The number of respondents saying that their health has gotten better is about the same as the number saying that their health has gotten worse.

Slightly less than half of the respondents say that they worried a lot about their family's health during the last year. Lower income and less educated respondents and those describing their own health as poor are the most likely to have worried about their family's health.

Conclusion

Alabamians believe that high costs are one of the major health care problems facing the state. About half of the respondents in the Capstone Poll survey say that high costs prevent them from receiving all the health care they need. Citizens place much of the blame for high health care costs on the national government and the health care industry, including physicians. The public is willing to try several proposed solutions to the problem of high costs. However, most citizens are unwilling to try any alternative which reduces their access to health care providers (though they are willing to receive care from someone other than a family doctor).

Most Alabamians have a high regard for the doctors in this state, and especially their own doctor. However, citizens are not totally happy with the performance of physicians. Specially, many members of the public believe that doctors are overpaid and uncaring. Citizens also wish that doctors would spend more time with their patients. A majority of the respondents in the survey would allow the national government to have greater control over the quality of care provided by doctors. Many individuals believe that negligence or incompetence on the part of doctors is a major reason why the number of medical malpractice suits has increased. A majority of the public would be willing to sue a doctor (though this does not necessarily mean that they will sue their own personal physician) if they believe that the doctor has made a serious mistake.

In selecting a family or primary doctor, individuals are most concerned about the quality of care they will receive. Individuals learn about a doctor's ability both through word-of-mouth and through personal experiences with doctors. This suggests that how doctors treat

TABLE 18

MEASURES OF RESPONDENT'S OWN HEALTH

How would you rate your own health at the present time — excellent, good, fair, or poor?

Excellent	31%
Good	42
Fair	22
Poor	5
Total	100%
N	504

Has your health gotten better, stayed about the same, or gotten worse over the last 5 years?

Better	20%
Same	62
Worse	19
Total	100%
N	504

During the last year, I have worried a lot about my family's health.

Strongly agree	5%
Agree	40
Disagree	52
Strongly disagree	3
Total	100%
N	498

TABLE 19

Age	*Medical Association Sample Characteristics*	*1980 Census Characteristics*
20-24	10.7	13.98
25-29	13.2	12.22
30-34	12.3	10.98
35.39	9.7	8.88
40-44	7.4	7.80
45-49	10.2	7.45
50-55	8.9	7.65
56-59	4.3	7.38
50-64	6.8	6.56
65+	16.5	17.08
Race		
White	78.7	75.2
Black	20.1	22.5
Hispanic	0.4	.8
Other	0.8	1.4
Sex		
Male	53.2	59.4
Female	46.8	40.6

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ONE FOR ALL



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The Three Musketeers
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ONE FOR ALL – One tablet treats pinworm in any patient, regardless of age or body weight.* Obviates need to calculate individual dosages.

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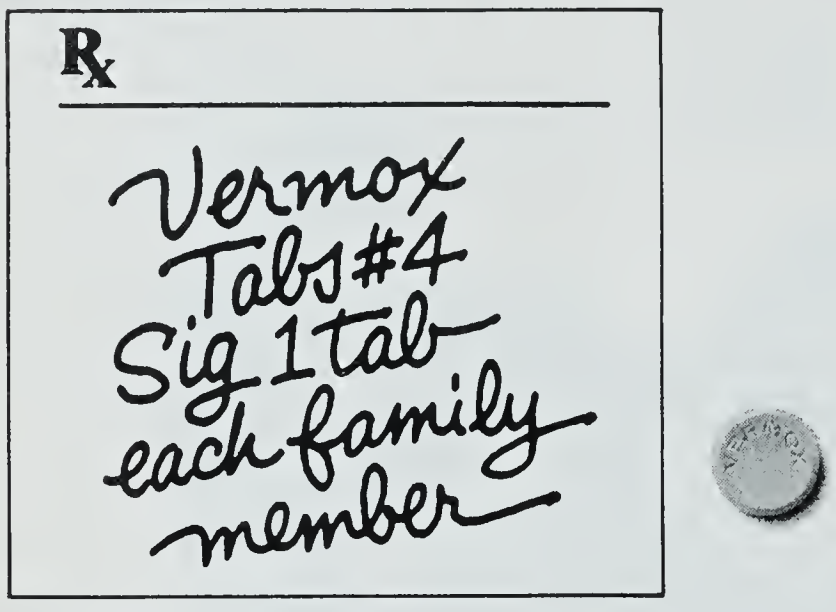
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(mebendazole)

JANSSEN PHARMACEUTICA

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Please see complete Prescribing Information on adjacent page.

VERMOX® CHEWABLE TABLETS
(mebendazole)



DESCRIPTION VERMOX (mebendazole) is methyl 5-benzoylbenzimidazole-2-carbamate.

ACTIONS VERMOX exerts its anthelmintic effect by blocking glucose uptake by the susceptible helminths, thereby depleting the energy level until it becomes inadequate for survival. In man, approximately 2% of administered mebendazole is excreted in urine as unchanged drug or a primary metabolite. Following administration of 100 mg of mebendazole twice daily for three consecutive days, plasma levels of mebendazole and its primary metabolite, the 2-amine, never exceeded 0.03 μg/ml and 0.09 μg/ml, respectively.

INDICATIONS VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (common roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies as a function of such factors as pre-existing diarrhea and gastrointestinal transit time, degree of infection and helminth strains. Efficacy rates derived from various studies are shown in the table below:

	Whipworm	Common Roundworm	Hookworm	Pinworm
cure rates				
mean	68%	98%	96%	95%
(range)	(61-75%)	(91-100%)	—	(90-100%)
egg reduction				
mean	93%	99.7%	99.9%	—
(range)	(70-99%)	(99.5%-100%)	—	—

CONTRAINDICATIONS VERMOX is contraindicated in pregnant women (see Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

PRECAUTIONS *PREGNANCY:* VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

PEDIATRIC USE: The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

ADVERSE REACTIONS Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

DOSAGE AND ADMINISTRATION The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food. For the control of pinworm (enterobiasis), a single tablet is administered orally, one time. For the control of common roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days. If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

HOW SUPPLIED VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets.
VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium.

US Patent 3,657,267
December 1979

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the patients they have will determine how many more patients their practices will attract. In selecting a family doctor, individuals give less emphasis to the location of a doctor's office, the office hours kept by a doctor, or by the amount of money charged by a doctor.

Characteristics of Respondents

The respondents to this survey appear to be generally representative of Alabama adult citizens. The exact composition of the sample is disclosed in Table 19 and shows a balanced representation of age and race categories. The sampling process provided a slightly higher proportion of females than is found in the population. This is a constant feature of telephone interviews. Although it was not a part of the sampling plan, this may be advantageous since it appears that women have more responsibility for family health and more personal usage of physician services. ⊡

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Then & Now

by William L. Smith, M.D.

Physicians who graduated 55 years ago, just as those who graduated five years ago, entered practice feeling that they were very well prepared to offer their patients superior, modern medical care.

A few of those graduates of 1927 are still practicing today, and surely, most were very active when Sulfonamides and penicillin were introduced; when early ambulation following surgery and delivery was being proven as proper treatment; when fluid and electrolyte balance was understood and milliequivalent replaced guess work. They were enlightened and aided in practice by more discoveries in science and medicine during their years of practice than all previous increase in knowledge since the dawn of time.

Take a look at some of medicine of 1927. Look through the ''eyes'' of *Medical Clinics of North America,* Vol. 11, No. 3. This November issue, published by W. B. Saunders Company, was written by distinguished physicians of Tulane University, many of whom taught more than a few current Alabama physicians.

The first paper was by John Herr Musser, M.D., Professor of Medicine. Dr. Musser wrote on measles which he admitted ''to be a rather hackneyed and trite condition upon which to give a talk today.'' However, there had been an epidemic of measles that year. There were various complications and some deaths. In January, 89 cases were admitted to the measles wards at Charity Hospital. (The old Contagious Disease Hospital near Claiborne Avenue and Gravier Street.) One hundred and eleven were admitted in February; by May, the end of the epidemic, there had been a total of 356 admissions.

In 1927 the etiology of measles was unknown. Dr. Charles W. Duval, Professor of Pathology at Tulane, had isolated an organism from the blood of children suffering from measles which seemed to be the same as one isolated by Ruth Tunnicliffe under similar conditions.

The incubation period and symptoms have not changed, nor has the treatment to any great extent. Now, however, we know the etiology and have the prevention, the vaccine.

Dr. Duval, mentioned above, wrote on scarlet fever. This article, except for the treatment with antibiotics, could be used today in teaching pediatrics. I. I. Lemann, M.D., wrote on diabetic gangrene. Remember, insulin had been discovered only about four years earlier and there was no antibiotic or chemotherapy.

There is a pictorial presentation of macular lesions of leprosy by Drs. Ralph Hopkins and O. E. Denney. Dr. Henry Despit presented two cases of intracranial tumors. Dr. S. Chaillé Jamison (Dr. Jamison had a meticulously groomed wax moustache and wore light and dark two-toned purple shoes made in Europe) wrote on streptococcus Pneumonia. Again, nothing has changed but the treatment. There are several other articles by distinguished clinicians. Three, however, are more interesting.

A paper describes in detail the history, physical findings, and autopsy of a 39-year-old woman with a foreign body within the abdomen. It was a surgical sponge left after surgery for a ruptured tubal pregnancy.

Cholecystography was first employed in 1924 by

continued on page 41

HYPERTENSION:



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CONTRAINDICATIONS

1) bronchial asthma; 2) allergic rhinitis during the pollen season; 3) sinus bradycardia and greater than first degree block; 4) cardiogenic shock; 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless it is secondary to a tachyarrhythmia treatable with propranolol; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE: In congestive heart failure, inhibition with beta-blockade carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. In patients already receiving digitalis, propranolol may reduce the positive inotropic action of digitalis and may have an additive depressant effect on AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, in rare instances, cardiac failure has developed during propranolol therapy At the first sign of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and closely followed until threat of cardiac failure is over.

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Give special consideration to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Propranolol should be withdrawn slowly, since abrupt withdrawal may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta-blockade impairs the ability of the heart to respond to reflex stimuli. Except in pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery. In case of emergency surgery, the effects of propranolol can be reversed by administration of beta-receptor agonists such as isoproterenol or levarterenol, but such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (e.g., CHRONIC BRONCHITIS, EMPHYSEMA), administer with caution, since propranolol may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta-receptors.

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA. Propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia, especially in patients with labile diabetes A precipitous elevation of blood pressure may accompany hypoglycemic attacks.

USE IN PREGNANCY: Safe use in human pregnancy not established Embryotoxic effects have been seen in animals at doses about 10 times the maximum recommended human dose.

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if propranolol is administered, since it may occasionally produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

Observe laboratory parameters at regular intervals Use with caution in patients with impaired renal or hepatic function.

ADVERSE REACTIONS

Cardiovascular: bradycardia; congestive heart failure, intensification of AV block; hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type; thrombocytopenic purpura. *Central Nervous System:* lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances; hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics *Gastrointestinal:* nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis. *Allergic:* pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress. *Respiratory:* bronchospasm. *Hematologic*: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura. *Miscellaneous:* reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta-blocker (practolol) have not been conclusively associated with propranolol. *Clinical Laboratory Test Findings* Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

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7997/882

Reference: 1. Freis, E D Hypertension (Suppl. II) 3:230 (Nov.-Dec.) 1981

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But, Look, the Morn

Claude L. Brown, M.D.*

Sometime between eleven and twelve at night, depending upon the pressures of the emergency room and the sobriety of the orderly, we were served coffee, milk, and buttered toast in the doctors' lounge. This respite never lasted more than fifteen minutes, but, as in most stringent circumstances, we were grateful for small blessings. Usually there were only two men in the house at night — the intern on emergency room and ambulance call, and the other one who handled everything else in the hospital. These would slump wearily in the old cracked leather chairs in the musty lounge. Rarely, the resident or an attending physician might join us. The milk was cold, the toast fresh, and we could sit down.

But the orderly could be an obstacle to this brief bliss. Charlie Willis, black male, age sixty to eighty, was shuffle-footed, slightly stooped, and always unhurried. He was bald except for a fringe of grey hair, wore a clean, short white coat, and a lugubrious expression. He had an obese, sullen wife who had "the sugar, bad," and a horde of troublesome relatives. His religious interests led him frequently to solicit money for the support of church projects, either sociological or architectural. Also needing financial aid were many of his dependents, who according to him existed in wretched turbulence. Soon after I started my internship he asked, sorrowing, "Doc, can you loan me a dollar til pay day?"

"Why do you need a dollar, Charlie?"

"My daughter — the one's got the run-away nature — that no good fellow she left with has done kept running."

"How can a dollar help this nature?"

"It can't, I reckon, but it can help buy her a bus ticket to get back home to her mama."

When I explained to him that most of us lived in marginal poverty he merely stared at me as if my statement had no more credence than if I had announced that I was Lazarus, freshly risen. He was possibly my first encounter with the layman's fixed conviction that all doctors are rich. He was never slovenly or disrespectful, he was never angry or complaintive, he bore fate's many blows with calmness and only an occasional mild supplication — on all these counts I could not say as much for myself.

However, to smooth the path a bit on his road to Golgotha he had found, and used with sometimes abandon, a time proven measure: he did like to look upon the wine when it was red. When he drank, which was almost every Saturday night, he was the same Charlie, except that he was out of balance. There were three specific indicators of his alcohol blood level: the degree of lateral strabismus of his left eye; his voice lifted in song; and his acting out the cherished illusion that he was a *medical* orderly.

Sober, his left eye was only slightly off center; as he surreptitiously nipped along during the night the medial rectus muscle progressively succumbed and the eye drifted sideways until, around midnight, there was little visible in the orbit other than the white sclera. The first several times that I noticed this phenomenon, before I learned of Charlie's hidden bottle, I thought that I was just inattentive from fatigue, or that perhaps he had a glass eye which he had mis-inserted, or that I was hallucinating — the last seemed the most probable,

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considering the state of our often bizarre world plus our inner confusions.

From his years in the hospital and his need for self regard he held firmly to the notion, which blossomed disastrously when he drank, that he had competence as a surgical assistant. Namely, he thought that he was a skilled, in his word — ''dresser.'' Of course, Charlie did not know the three rollers of Desault from a hangman's noose, but when thoroughly into the spirit of the thing, he was not boggled by technicalities. We disliked to rail at him, so we implored him to stop being helpful and just do his proper job. This was an insult, which, as far as I could tell, spurred him to even more strenuous efforts. At two o'clock one morning he staggered into the emergency room where I had just finished suturing a long scalp laceration. ''I know you is so tired, Doc. (He meant it, bless him — that was the rub.) There's just one more waiting — he didn't want me to, but I got his arm undressed to save you time.''

Adjacent to the emergency room was a long hall with chairs where the patients waited. O, hope that springeth eternal! I walked hurriedly there, and saw a man lying with his head and trunk over the seat of two chairs, his legs sprawled on the floor. In his right forearm he had a ragged tear which had ripped into the radial artery. Blood poured profusely from his wound; he was in shock. A heavy towel had been used as a pressure dressing, but Charlie had cut this off. It lay on the floor, more blood soaking into it. A woman paced apprehensively, crying, ''He was all right a few minutes ago — that old nigger came and cut off his bandage — he's hemorrhaging — he's passed out!'' I reassured her, got the man into the operating room, and his wound attended. Charlie was a dedicated and dangerous dresser.

On another fall night at eleven-thirty Harold Andrews, the other intern on call, and I sat in the lounge eagerly awaiting our milk and toast.

''Do you want the radio on?''

''Hell, no. I just want to look at the ceiling, let my feet rest, and think of nothing. Why are most deliveries at night?''

''Coffee ought to be here in a minute. I told Charlie we were ready.''

Outside the room, from far down the hall and slowly growing louder, came a rough baritone:

''To the old rugged cross I will ever be true —'' Then a sharp female voice, ''Charlie, stop that singing. You're drinking again. I'm going to report you in the morning.''

The door-knob rattled; the door did not open, the knob shook again. ''Christ,'' said Harold, ''Let him in before he drops it.''

I opened the door and Charlie lurched in. His gait wavered, his hand shook, but he spilled not a drop of milk or coffee. He shambled across the room and placed the tray carefully on the table, all the while singing, less loudly and quite melodiously:

''Til my trophies at last I lay down.'' He turned unsteadily and smiled happily at his doctors. His left eye was a gibbous moon, bright in a black sea.

The next morning after a few hours sleep, a shower and a change of uniform, and the always rejuvenating breakfast, I walked into the emergency room with a lightened heart. Mornings were usually quieter; the worst catastrophes occurred at night. Man, adept at self-delusion, is aghast when his ruses falter. So I was shaken when the nurse said, ''They're bringing up a bad leg injury.''

He lay on the stretcher, a large young man — tousled brown hair plastered to his forehead and the back of his neck by sweat; thick fingers laced together across his abdomen. His face was calm, and as I felt the rapid, pounding pulse he grinned and said, ''Hell of a way to start the day, Doc.''

The bottom of the right pants leg was bloody and crumpled; the shoe was scuffed and bloody. As I carefully unlaced the big workman's shoe he groaned. The shoe came off with difficulty, and even before it was removed I could see that the foot was severely mangled. Fully exposed, the extremity, from five inches above the ankle distally, could barely be recognized except for the toes — it was a flattened, macerated mass of pulp with bits and splinters of bone protruding at random, and white tendons interlacing the red background. It had been smashed by the fall of a steel beam that he was rigging. The construction company that employed him also employed, as company doctor, our own chief of surgery, Dr. Conover. The doctor had been called, and was on his way. I was glad for that. We gave the patient morphine and started fluids, cleaned him up and gowned him.

I said to him, ''We're going to fix you up. Do you feel a little better?''

''Doc, is my leg going to be all right?''

''I don't know — we'll see what Dr. Conover says.''

The doctor arrived shortly and stepped purposefully into the emergency room. Nathaniel Conover was not only chief of surgery, but chief of staff. Wispy-thin, he wore a dark, wrinkled suit that apparently had been made for a larger man. He had on a black slouch hat that he did not remove. He had the eye of a hanging judge and an incongruously deep, rasping voice. On several occasions I had heard his round curses reverberating in the long corridors of the hospital, snapping the drowsing orderlies out of their stupor, crimsoning the faces of the ward nurses, and no doubt sending the good sister to her knees at night with an additional prayer for the blighted soul of the chief of staff. His profanity was picturesque, brothy, as much a part of him as the inevitable flakes of tobacco and ashes on his vest. He clung happily to the tenet that any obstacle, regardless of its nature, could be reduced by some degree by swearing at it. This definitely, and usually, included

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people. He had a supreme confidence that enabled him to deliver forceful opinions — even when he was dead wrong. Striding irritably through the wards and halls he was Pizarro, ready to burn his boats at a moment's notice, with a fine damn-you-to-hell wave to the crew. He intimidated everyone within his orbit. I was in his orbit now.

He leaned over the patient and peered at the injured member, cigarette ashes dropping on the patient's gown.

Some of the brightness of the morning still lingered in me. I said, "Mashed badly, isn't it, sir?"

"Flat as a cow-pie!" he roared.

He whipped his hat off and fully extended both arms; the gesture sent a small cloud of ashes, smoke, and dandruff flying around his head. With the fervor of Urban II proclaiming the First Crusade he shouted to the operating room nurse, "Prepare him for surgery!"

It was rumored, on no discernible basis, that Dr. Conover had trained under Halsted, and that he was an expert anatomist. He was seventy, but I had no trouble believing that he was ten times that old; I could see him doing uroscopy with Galen. So when he whirled on me and growled, "Know anything about amputations, boy?" I had the light-headed thought that he was going to kindly instruct me in surgical procedures.

My fingers were sore from much suturing in the emergency room; I did not think that surgery was the Queen of the Arts. I knew no more about amputations than I did about celestial navigation, but like all students I had learned to answer a puzzling question with a tangential answer. Thus I began obliquely, "Well, sir, I've read about Lister in Glasgow — "

"Screw Lister!" he screamed, and stamped the floor. He grabbed my arm and barked, "Let's scrub."

While we changed clothes I marveled that so much vigor, both in action and in vehemence of speech, could spring from this cadaverous figure. All flabby skin and knobby bones, he slipped briskly out of his ill-fitting business suit into an equally ill-fitting scrub suit. He rolled up the sleeves and pants, and then stood by the sink watching me scrub.

"Damn it," he grumbled. "I was going fishing this morning, 'til this blasted accident came in. Aren't you ever going to finish?"

He did not scrub, but this did not totally surprise me. If he had indeed worked under Halsted none of the latter's passion for antisepsis had impressed Conover; we had seen him operate, not only without scrubbing, but without gloves. We went into the operating room, and I quickly got into my sterile trappings. He leaned against the wall and glared at the patient on the table.

The man was anesthetized, breathing evenly. There was two tourniquets around his right leg. It lay, white and bloodless on the white sheet. The extremity looked like that of a dead man, ending with the grotesquely mangled red foot and ankle.

Dr. Conover coughed and asked, "Well, are you going to start, or are you just going to stand there, like a mule at a gate?"

I did not comprehend. "Start?"

"Hell and hot blazes, yes, start — you want the damned leg to get gangrenous?"

I did not move; the enormity was just beginning to seep into my awareness.

"Listen, boy," he said, measuring every word slowly, "pick up that scalpel and get at it."

"Dr. Conover, I don't know — I've never seen any amputations — "

"It's not a God-damned thing to it. I could do it myself, in ten minutes, not counting the skin sutures — if I could see."

I still hung fire, still not fully believing what was happening.

He hissed, "Get going or I'll kick you out of this hospital. Pick up that knife — I'm going to tell you what to do."

He was perfectly serious — But wait! I realized this was only a dream — That's it! I — and the other interns, for we related such matters to one another — occasionally existed in the half-world between dreaming and consciousness. This difficulty in separating the dream from reality occurs sometimes in psychosis: perfectly fitting for us. I will awaken, and someone will be feeding me oatmeal.

"That's the way," said Dr. Conover. "Continue the incision around, but remember to leave a flap posteriorly, so you can bring it up and over the end of the tibia."

The blade slid almost effortlessly through the skin, fascia, and muscle.

"Find and ligate those blood vessels — Do you see them?"

Since they were not bleeding I did not see them. He came closer, peered into the incision, stabbed with a finger and said, "That's the posterior tibial. Ligate it. Find the others." He bumped the anesthetist's knee and swore viciously at that person.

I tied off everything that looked remotely like a blood vessel.

"Get that saw going. Good Christ, you've already been twenty minutes. Remember to cut off the fibula about an inch shorter than the tibia."

Somehow it was almost finished: the flap pulled up and over the smoothed anterior surface of the end of the tibia, two thirds of the skin sutures in. My fingers trembled, and Dr. Conover shook his head disapprovingly.

"You'll never make a surgeon, boy."

"Right as rain you are, sir. Never thought so myself. A violinist, perhaps? Or wholesale groceries?"

"Nope, by God, you don't have the guts," he mused.

Absolutely right again. I most certainly didn't have the guts. But hold! What do you mean — what guts are

you talking about? I didn't have the guts to do half of the procedures that I undertook. You arrogant old bastard, can you fault me for being fearful, even horror-struck, at daily undertaking potentially lethal acts for which I had no experience, no training? Oh, hell yes, I was a demon operator: on other occasions I had anastomosed blood vessels to tendons, nerves to fascia, ligated the tips of my hemostat, sewn my glove to the skin — we were all floundering, drowning in a vast sea of demands beyond our ability.

But here is this patient, and his stump doesn't look *too* bad, and he lives.

I'll burn my own boats, Dr. Conover, thank you.

I visited Ben Thompson, my first amputation, almost daily. His cheerfulness appealed to me. He was an uneducated but intelligent fellow, who had been raised in the woods in another county and had come to Mobile to work. His leg did very well, to my tremendous surprise and gratification. One day a visitor sat by his bed. Ben said, ''Doc, this is Uncle Ike.''

Uncle Ike took my hand in a gnarled paw and gave it a perfunctory, single shake. He was portly, dressed in clean overalls, had white hair and a straggly mustache, and did not look me in the eye. Ben noted this, and said, ''Uncle is against hospitals and doctoring. It ain't nothing personal with you, Doc. I've told him how my foot was smashed awful, and had to come off — and how you operated on me, and you — everybody here — have been real good.''

Ike stared hard at me. ''He had a foot — '' indicating the bandaged stump — ''when he came in here, didn't he?''

Yes, but — ''

Accusingly, ''Well, he damned sure ain't got one now, has he?''

Ben intervened, ''Listen, Ike, I've explained it to you — now hush up, and tell me about your business.'' He winked at me.

Ike twisted in the chair some, and recrossed his legs. He looked out the window, back at Ben, then again at me. Then with a quick movement he suddenly produced from nowhere, as a magician plucks a vase of flowers from the air, a large bone-handled knife. This act startled me, and seeing my face Ben said, ''Oh, he's just thinking about things.'' Probably about cutting my throat, I thought.

From the bib pocket of his overalls Ike took a spool of black thread. He then seemed to relax, as he fondled the spool between his fingers while with the other hand he strapped the knife blade on the sole of his shoe. I now expected a sleight-of-hand performance, but Ike appeared sunk in reverie.

Ben said, ''He sets great store on that thread.''

Well, why not? In a half-crazed world why shouldn't an old country ruffian find rapture in a spool of thread?

Ike looked keenly at me and asked, ''You know anything about corn liquor?'' Without waiting for me to reply he answered himself, ''Hell, you're a doctor — don't care about nothing but cutting — you don't know about making whiskey.''

Ben said, ''Ike's mighty proud of his whiskey. It don't hurt none to say it now, 'cause he's practically retired. Besides everybody knows he was the biggest moonshiner — ''

Ike interrupted eagerly, ''Made the best stuff in Tallapoosa county for twenty year.'' He snapped shut the blade of the knife, and said with a wolfish grin, ''The sons-of-bitches never did catch me.''

His previous wariness towards me vanished as he warmed to his subject. ''You see this thread?'' He held the spool before my nose, and then returned it to the pocket which he carefully buttoned.

''All them dumb bastards knew I run big stills, but they never come on me making anything. Oh, they'd find the stills, and tear 'em up, dynamite them — but catch me — no, sir, never once. I never been arrested.'' He chuckled happily, ''You know why?''

I was captivated by the enthusiasm of both these men. My slave labor did not brim with *joi de vivre*. ''How did you always escape?''

''Escape? Hell, I told you they never *caught* me. It was the thread.''

Thoroughly hooked now I quickly asked, ''How did the thread do it?''

He rubbed both thighs and patted the pocket that held his talisman. ''When I'd leave my works, I'd run this black thread, number eighty — you see it's real fine — all around the place, on the bushes. And on every trail, run it around two foot off the ground — that way, nothing but a deer, or a man — oh, a dog might, but not likely — will knock it down. All the little animals — coons, opposums, rabbits, such-like that the woods is full of — they're low to the ground, and they'll go under it. So when I'd come back to my still, if any of my strings was knocked down — it be hard to see in the woods, it's so fine — if any thread ain't where I put it, I'd just go right on back home. They could have the old still — I built'em easy — but they ain't got me.'' He guffawed with pleasure and slapped his hands together.

Ben added his emphasis. ''Yep, Ike never goes anywhere without his thread — figures its saved his neck many a time.''

The old moonshiner was greatly pleased. ''Doc, maybe I'll bring you a present — from me and Ben. 'Course, I don't hold with cutting on people, except in a fight — but maybe you're all right, anyway.'' He shook hands, looking me in the eye, and departed.

Ben said, ''He must have taken to you. He don't ever give away any of his good stuff unless he likes you.''

On the day of Ben's discharge, after a convalescence that was remarkable to me because it was uncomplicated, there were several relatives, including Uncle Ike, to assist in his departure. Uncle handed me a brown paper bag, winked and said, ''It ain't none better.''

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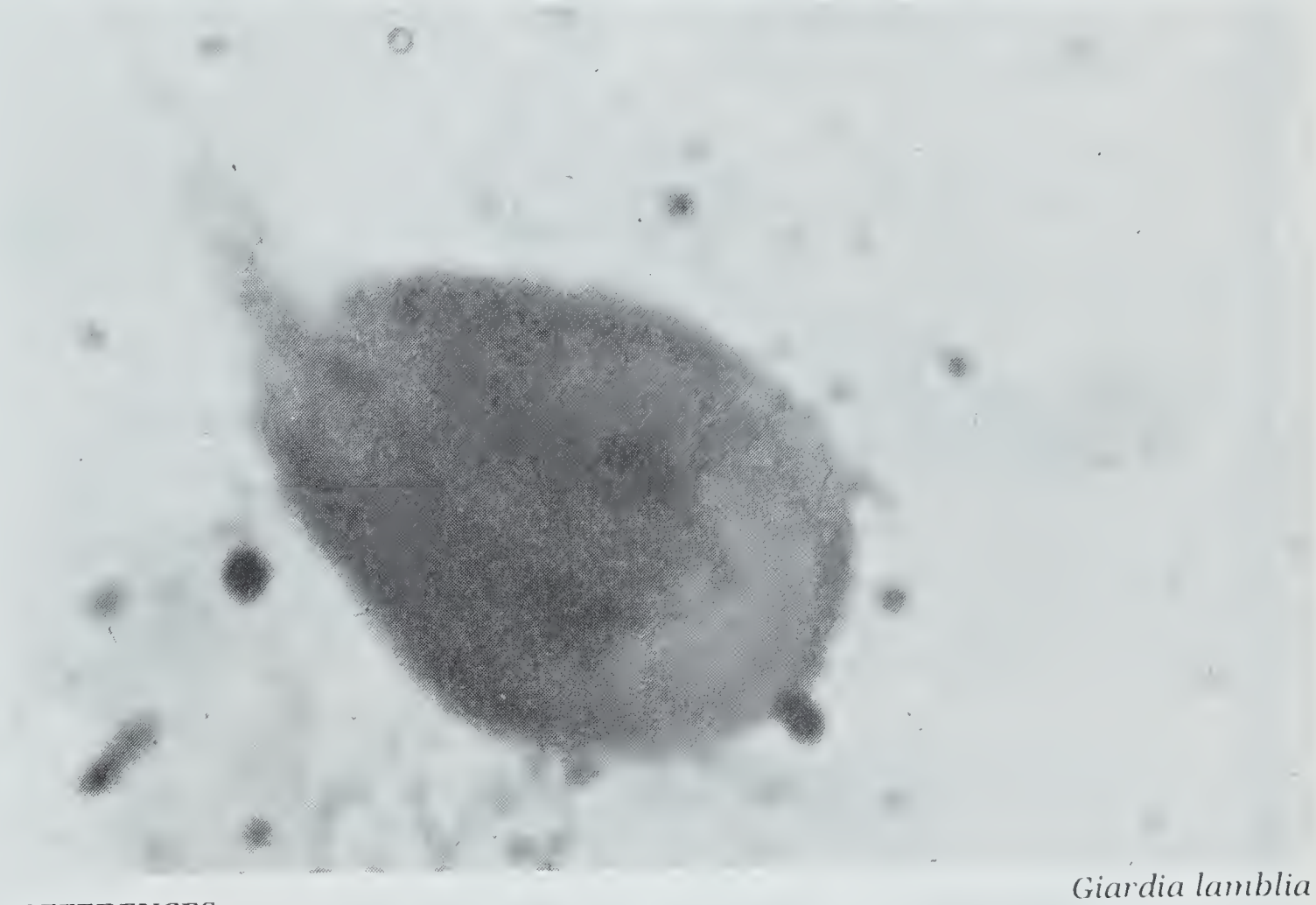
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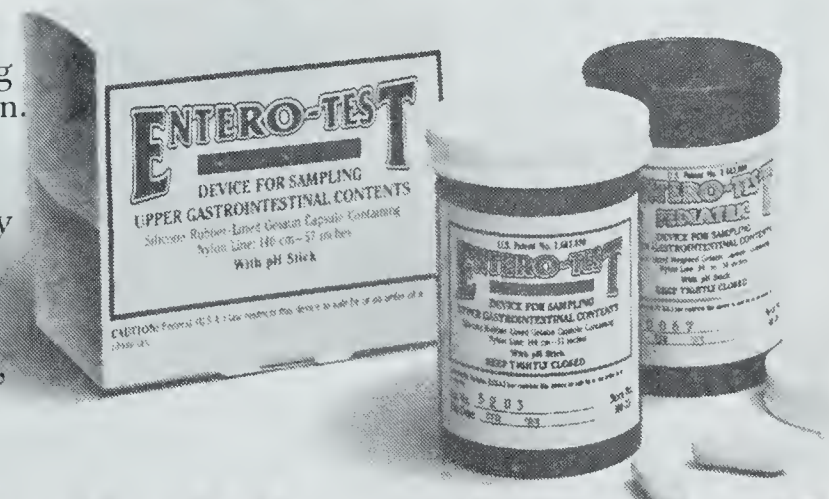


Giardia lamblia

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Such a gift was not meant to be hidden under a bushel. Everyone watched me as I pulled a quart mason jar from the bag. The jar, filled with what looked like water, bore a label. Ben exclaimed, "Gosh, that one's labelled. Most moonshine ain't got no label, Doc. Ike don't label much, himself — it's personal stuff, when it's got his sign on it."

The rectangular white label displayed a black cat, standing upright on his hind legs, tail arched over his back, urinating into a jug. A verse under this striking device stated proudly:

Better taste you'll never see
Its Panther Pee

I smiled — almost laughed, but stopped myself.

Ike glowed. "Ain't it pretty? And smooth as sherry wine. Go ahead, try it, Doc." Seeing my hesitation he reassured me, "It's good stuff — we drink it ourselves — ain't got no lye, no lead — all pure. Just take a swallow."

In for a pence, in for a pound, thought I. I'd just wet my mouth — it had little odor; just the small amount on my tongue burned badly, and the vapor from that fiery concoction assailed my pharynx, my nostrils — I sneezed, coughed and half strangled, all at once.

Ike said, "Sure, it takes a little getting used to, but it's mighty good. I won't sell any of that batch, keep it for us and friends."

I could not understand that there could be a ready market for this product, but I thanked him as best I could, with my eyes watering. We shook hands all around again as they left. I screwed the cover back on the jar, put it in the bag, and left it temporarily in a corner of the doctors lounge. Perhaps I'd give it to Charlie for Christmas. Splendid gifts should not be wasted on the unappreciative.

Walking out of the emergency room one day about a week later I saw Ben, swinging strongly along on his crutches, but with a worried expression on his usually cheery face.

Before I spoke he said, "I came looking for you, Doc. It ain't me — the leg's doing good, no trouble. It's Uncle Ike. He took sick four days ago, just a bellyache at first. Two days it griped worse and he took a dose of salts. He's been bad ever since. You know how blamed hard-headed he is, won't fool with doctors. He wouldn't be here now if he hadn't got so weak — we just picked him up and dragged him into the car, him fussing like hell — but his belly hurts bad — he's real sick."

Indeed he was: pale, dehydrated, all his heartiness gone — and his abdomen distended, completely silent.

Several hours later, after examinations and conferring with Dr. Laramie, one of the staff surgeons, I knew that Ike had intestinal obstruction, probably from a strangulated hernia that, typical of him, he had simply ignored. Dr. Laramie said, "He has to have surgery. That gut may be gangrenous now. I've spoken to him, but he refuses. You know the family — go get their permission." Just a simple request. Merely ask the Sultan if you may visit the seraglio.

I knew that it was useless to talk to Ike, so I met with the relatives to solicit their permission for surgery. There were Ben and two quiet fellows who twisted their caps in their hands, and an ancient female who sat, hugging herself and scowling at me, whom Ben introduced as "Grandma."

Thinking to start with an explanation of the gravity of the problem I said, "Ike, as you know, is very ill. There is a blockage of the intestines — "

Grandma interrupted, "I've heard of it — locked bowels!"

I continued, "We have to operate, for if we don't the bowels may not get proper blood and die — "

Grandma, who seemed to be taking greater interest all the time, asked, "That's mortified flesh, when it dies, ain't it?"

Regardless of her conceptions of pathology the old soul looked like the best bet I had going.

"That's right, mortified flesh, Grandma." I looked directly at her. "We have to operate to relieve that."

The men were looking very uncomfortable. Ben said morosely, "You know how Ike looks at cutting, Doc. He'd never forget it if we said go ahead — he'd be mad with us forever."

Grandma said firmly, "That old fool don't think about nothing but moonshining and cat-fishing. I ain't scared of him being mad with me." I believed her.

I said slowly, looking at each one, "He's not going to be mad with anyone if he's dead — and if he lives, with the operation, he may be mad for awhile, like he was about Ben's leg, but he'll be glad he's alive, and quit blaming you."

They debated and wrangled, but Grandma was the bell-wether and she forced them to agree reluctantly on the surgery. I thanked them, told them they had done the right thing and that Ike would thank them, too — all the while wondering how they would react if Ike died. As I was leaving the room Grandma asked, "We know he's low sick. Do you believe in miracles?"

Such an absurd question! I not only believed in miracles, I was a daily participant (not producer) of them. Miracles were our stock in trade. As a house is filled with furniture, the hospital was full of miracles. Each ward teemed with them. We trafficked in the miraculous. I told her with entire sincerity, "Yes, Grandma. I know that miracles happen."

I met Uncle Ike on the cart as he was being wheeled into surgery. I was most apprehensive about his condition, and at what I had done. He looked dismal, and he spoke reproachfully, "Well, Doc, you got me where you want me — and where I said I'd never be, and wish to God I wasn't. Ah — " He then began to feel about his chest and shoulders, and then frantically to slap

around his neck and reach under the surgical gown; he was beating himself and thrashing around like a blind man attacked by wasps.

Thoroughly unnerved I asked, ''What's the matter, Uncle Ike?''

''My string — it's gone — that damned nurse said she'd pin it to my clothes — it ain't here — I got to have it!''

Good God! His cherished noumen — saved his neck many a time, Ben had said — he's always carried it with him everywhere — and now, in this dire spot, helpless and severely ill, going into surgery against his adamant wish, to be deprived of this treasured token was surely a death warrant.

Searching his clothes and the sheets, I was now as perturbed as he. There was no string.

''Don't worry.'' I patted his shoulder. ''I'll find it and bring it to you.''

I had to have a substitute, a facsimile; I'd never find *his* spool of black, number eighty thread. No time to go to a store, he'd be in surgery in a few minutes, no time — Suture material! That was the closest approximation, readily available. I began to run towards the emergency room; there we always had plenty of suturing supplies. Down the long corridors I ran. As I raced by Flash Hopkins, the ambulance driver, he jeered, ''If you've got to run that fast after her, she don't want to be caught.''

Reaching the emergency room I tore open the supply cabinet, dumped handfuls of suture material on the table and started to comb through the pile. The nurse asked, ''What are you looking for?''

''The very smallest we have.''

There was mainly chromic gut of several sizes, some wire, all too big. There was little demand for fine material; our suturing was not cosmetically fastidious. Finally I found some silk, number five zero. I broke two containers of it and began to dry the material with a towel.

The nurse observed, ''That's an interesting technique — are you going fishing with it?''

I snapped at her, ''Get me a safety pin.''

Back in the operating suite with my precious cargo I saw Uncle Ike on the table, gowned figures around him, the anesthetist in position. As I burst into the room Dr. Laramie said, ''What do you want? You're not sterile.''

Ignoring them all I bent over Ike, reached under the sheet, pulled his big arm out, and put the little ball of silk in his hand.

Dr. Laramie said harshly, ''Will you get out of here — you're contaminating everything!''

Which was true, but of secondary importance. Antisepsis must take a side seat for faith in this case — but there was no explaining that view adequately to them.

''It's his string, Dr. Laramie. He's got to have his string.''

The pre-anesthetic had not fully taken effect. Thank God, Ike was still barely awake. Holding his fingers in mine, I squeezed and moved his fingers. ''It's here, Ike, I've got your string, and you're holding it — Feel it?''

He feebly moved his fingers, palpating the silk.

''I'm going to pin it to your shirt.''

I wadded the silk into a lump and pinned it, then brought his hand up and placed it over the pin and made sure that he felt it there; he gave a flicker of a smile and I placed his arm back beneath the sheet.

Dr. Laramie was apoplectic; I thought if he hadn't had his gloves on he would try to strangle me. ''Get out of here right now — Now! — 'I'll see you about this.' ''

I had done all I could; magic and another miracle must do the rest.

On Sunday morning my alarm clock jangled at six-ten, interrupting three hours of solid sleep. Breakfast was at six-thirty and was not to be missed. My routine was: shower and shave, clean uniform: I might play a record softly if no one else was sleeping in the interns' quarters. I turned on the phonograph and walked to the window. It was good light, but the sun had not yet appeared over the roofs and tree tops. A breeze, imperceptible except for the motion it created, stirred the leaves of the big sycamore on the front lawn of the hospital. In the quietness distant church bells rang.

Behind me lay the hospital, not yet awake, filled with its tumult and travail. Before me the new day brightened. Around me swirled the waltzes from *Der Rosenkavalier*. I could see the glittering figures in the ballroom of the Schonbrunn, the lovely women and brilliantly attired noblemen, the sparkling candelabra, the music cascading over the senses.

The door opened without a knock. Charlie Willis, a bottle in his hand, reeled into the room. He had found my forgotten moonshine, and now, to him, the world was well lost and best forgot. He haltingly crossed the floor and stood beside me at the window.

Standing together, we made our salutation to the dawn. He swayed as if he were on the foredeck of a ship in a gale; his eyes were closed, and serenity smoothed the old face. He slowly raised the bottle, and just before the last ounce of Panther Pee poured into his mouth he murmured, ''Jesus saves!'' ⊡

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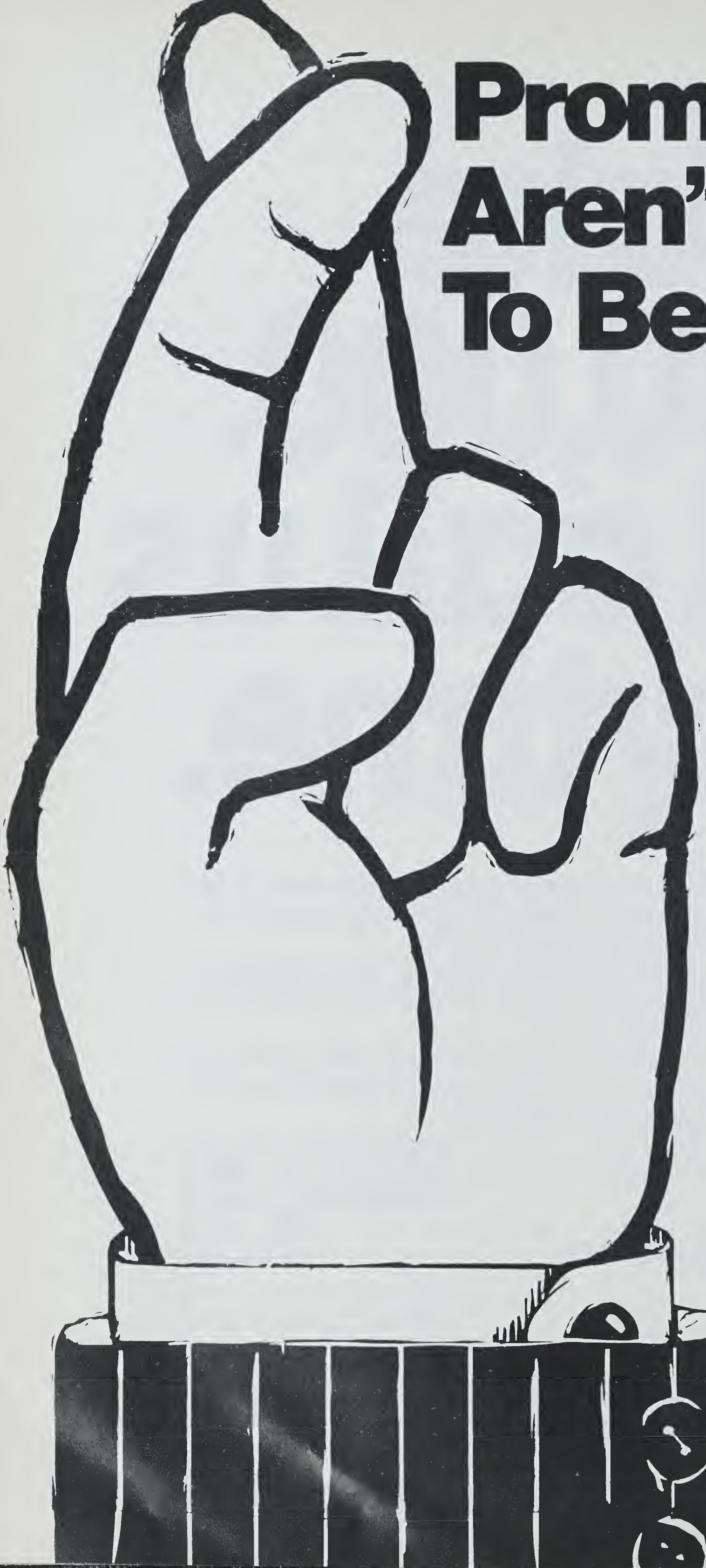
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Rx: Communicate for a Healthy Medical Marriage

A relationship thrives on communication. Set aside an hour (or even half an hour) for the two of you — alone. Communicate with each other and about one another. If you have trouble communicating, perhaps the following article will help. It was written by Alma Denny, a freelance writer from Brooklyn, New York for *Facets,* a magazine published by the A.M.A. Auxiliary, Inc.

SPOUSE TO SPOUSE: EFFECTIVE COMMUNICATION

How much time do you have to talk to your partner, really *talk?* Is there ever a right time — a good time? Mealtime, if it's ever a tete-a-tete time, is likely to be interrupted by phone calls or doorbells. In the car? Hardly — some topics require a measure of eye-to-eye contact. At night? Oh, you're both tired. Early morning? It might make you late.

All the more important, then, that when you do find the time, the place, the privacy for hashing out an important issue, you don't spoil the moment through clumsy communication. And while there are many courses, workshops, and groups dedicated to marriage enrichment from various approaches, a team of professors from the University of Minnesota has come to the rescue of that golden opportunity for talk with a simple program designed specifically to teach the skills needed for serious, effective, and successful communication between two loving people who "mean well." A *New York Times* reporter calls their "Couple Communication" course a tool for handling "explosive issues without exploding."

It's an easy course, structured into four sessions of three hours each. Originated in 1968 and an outgrowth of family counseling sessions, the course has been enjoyed by more than 100,000 couples, led by 2,500 trained instructors in the United States and Canada, Europe, and Australia. The program — which grew from work at the University of Minnesota's marriage and family counseling clinics — has received awards from the National Council on Family Relations and the Association of Couples for Marriage Enrichment.

And not a bit too soon, according to survey! Among 30,000 people responding to a *Ladies' Home Journal* poll in 1980, the biggest worry — ahead of money, children, sexual frustration — was "poor communication." And from another angle the answer to "What quality would have the highest priority if you were choosing a mate today?" was "the ability to communicate" — ahead of sex appeal, looks, and personality. Similarly, the 1980 Virginia Slims American Women's Opinion Poll canvassed 3,000 women and found that, while they preferred marriage to any other lifestyle, they chose "mutual communication and discussion of thoughts and feelings" as of primary importance to a healthy marriage.

It may seem strange for adults to be flocking to workshops to learn how to talk. But there's talk that's just so much noise, and there's talk that really communicates. The Couple Communication course zooms in on the skills needed for intimate talk, even on painful topics, which can strengthen, rather than threaten a relationship. No threats, no sarcasm, no putdowns — just a meaningful give-and-take for productive results.

The Couple Communication Course was developed by Sherod Miller, Ph.D.; Elam W. Nunnally, Ph.D.; and Daniel B. Wackman, Ph.D., now of Interpersonal Communications Programs, Inc., in Minneapolis, Minn. The material in this article does not constitute an endorsement of the course, but is presented for your interest.

At each session of the workshop the group of about 10 couples hears a short presentation of the special skills to be practiced that evening, and how they fit into the whole campaign for effective dialogue — the kind that gets listened to and responded to. Then individual couples, by some miracle of self-confidence, take the center and actually ''open up'' on an important topic — where to vacation or whom to invite for Thanksgiving. The others listen carefully and then offer feedback to often unbelieving ears. ''Did I say that?'' ''Is that how I sound?'' ''That isn't what I meant at all!'' The experience becomes eye-opening and ear-opening.

Perhaps the pervading message is awareness — awareness of each other's feelings, awareness of what has gone wrong in the past when communication broke down, or gone ''right'' when it succeeded. All the communication skills which are illustrated, developed, and practiced in the group are based on this awareness of each other's dignity, worth, emotions, and goals.

For good couple communication, these are some of the roads, as highlighted by the course and substantiated, according to Dr. Sherod Miller, by more than 25 separate studies in major universities ''under good controls.''

1. Pick an appropriate time and place. An advance warm-up helps. Say you'd like to discuss something that's on your mind as soon as you're home or in a place where you both can pay attention to the topic.

2. Develop listening skills. ''Oh, if you'd only listen!'' How many times have we heard that — or said it? We talk or get talked to, but does it register? Check it out. Ask questions to make sure you understand. Often what you are hearing is quite different from what your partner is really saying. And vice versa. Pause and ask, ''Can you repeat what I just said?'' This avoids guesswork. It also helps to detect a ''mixed message'' and unscramble it so as to deal with each part separately. (''I don't understand why you don't listen to me'' is a ''mixed message.'' There is a blame to respond to, and there is a ''closed assumption'' to wriggle out of!)

3. Try to get true feelings out in the open by using self-disclosure. ''I worry when you are so silent and look so grim. Sometimes I think it's my fault, something I said or did.'' One wife who used this honest approach was able to learn that her husband had been worried about losing his job and hadn't wanted to burden her with the anxiety. Now he could unload some of the tension, talk it all out, and she could accept his silences as natural rather than as rebuffs to her.

4. Avoid a win/lose tone by watching certain words. For example try not to start a question with ''Why.'' It invites a defensive reply. (Not ''Why are you late?'' but ''Was the traffic extra-heavy?'') Also, use I more than You or We or They or One or Everybody. ''I think Joe is a phony'' indicates your readiness to take responsibility for your own opinions, not to speak for anyone else, and to open the conversation to your partner's views. And, in general, steer clear of such no-exit terms as never, always, should, ought, right, wrong, good, bad. Accompanied by a harsh, loud, voice, a caustic accent, or a whiny sob, these can put a fast end to a discussion that might have led to some healthy changes in a situation.

5. Develop a style for talking to attain communication. The course stresses four styles, each of which has a role in effective dialogue. With style four presented as the substantive one — the one for success — expert communicators learn to use the other three with as much adeptness as a dancer changing steps. The emphasis is on what can be changed about self, about the other, and about the status quo. And always the goal is toward understanding each other's position, not on ''winning.'' At the end, of course, there can be a resolution of a problem, or just a clearing-of-the-air for still open options. But there's progress, without the need for giving-in by one, and suppressing hostility by the other.

We can learn to communicate and practice skillful, effective, and intimate talk, so that neither partner has to go through life with important things festering, and left unsaid.

Patty



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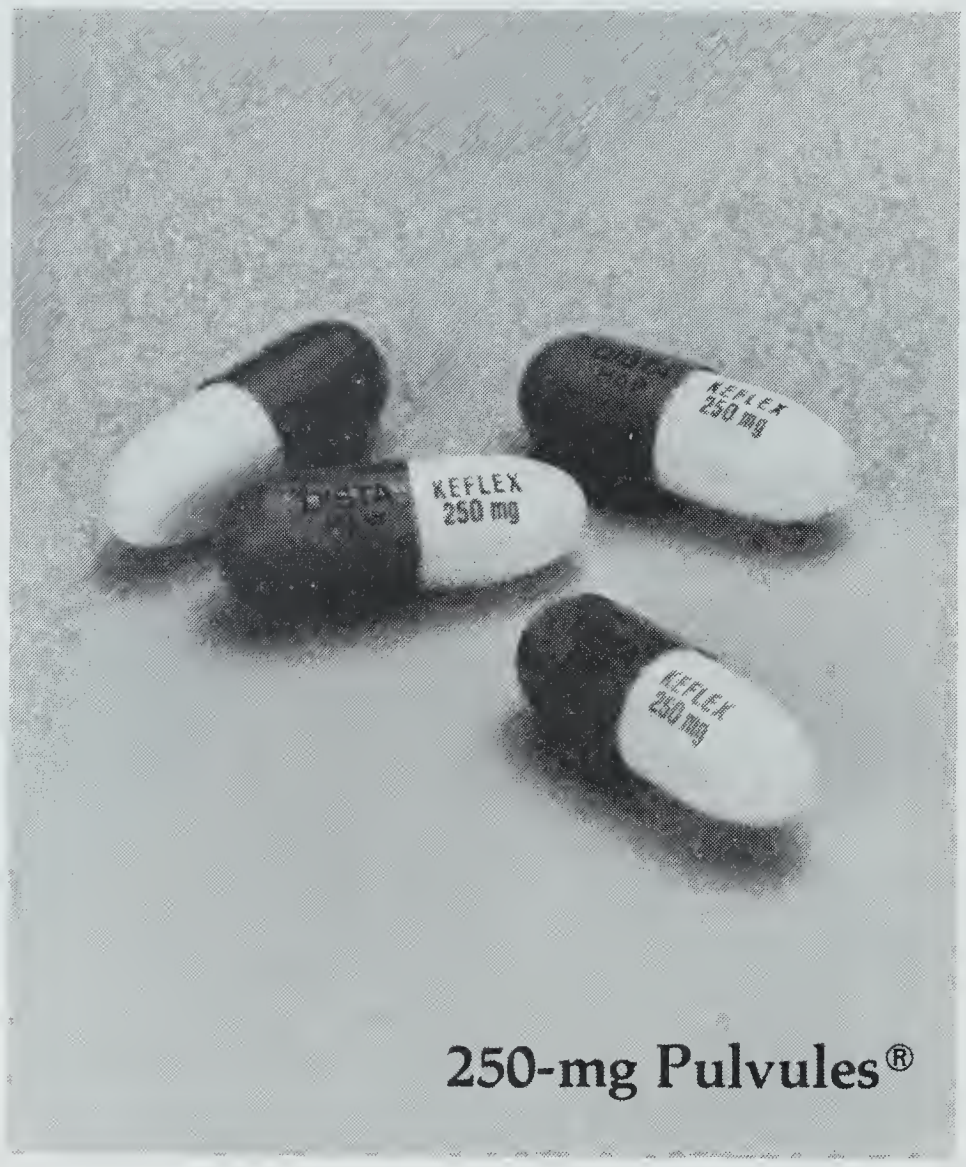
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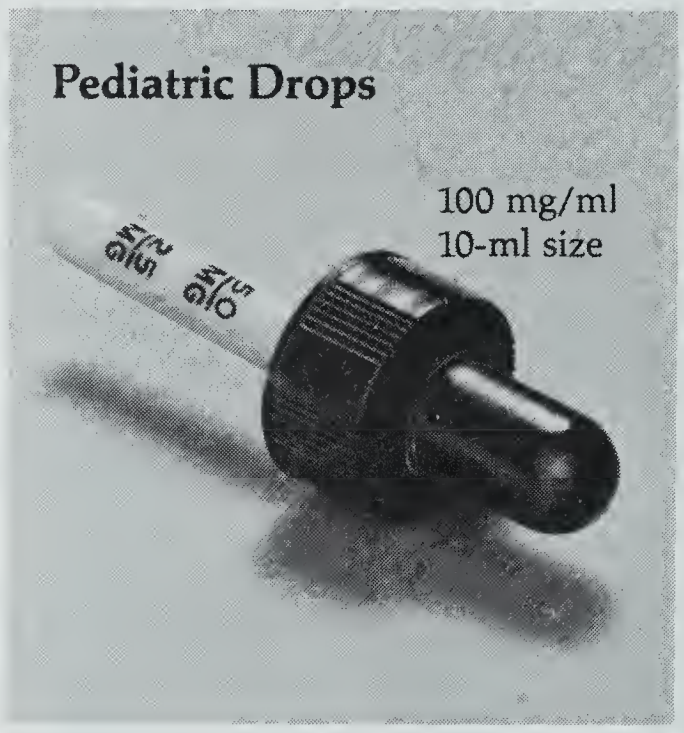
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President's Page

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the professions as ordinary trade, the false hope sounded in *Goldfarb* notwithstanding. But the FTC is a very different breed of cat. It is its own prosecutor, judge and jury. It can become virtually the master of any business, industry or institution it seeks to show the error of its ways. It is a high-handed, arrogant and officious bureaucratic agency, peopled by squads of lawyers with nothing better to do than hector and harass those of us who work for a living.

Therefore, organized medicine hopes and prays Congress, in its deliberations on the next appropriations bill for FTC, trims its claws and reminds the agency that the state-regulated professions were, are and will be exempt from their raiding expeditions.

MASA, as you know, has been told by FTC to produce everything under the roof on nurse practitioners and rural health clinics. That subpoena has been challenged in federal court in Montgomery. We have asked the federal court to hear our argument on the FTC jurisdictional question.

And there is the crux of organized medicine's belief that the intrusions of the FTC are not in the public interest and can only be destructive to the ancient profession of medicine. The federal courts are circumscribed by laws and elaborately protected by judicial review, with a whole body of rules of procedure and evidentiary safeguards. If we physicians are to be brought to the bar of justice for some alleged public injury, we want it to be here in federal court — not in the halls of that strange flatiron building in Washington, which makes up its rules as it goes.

In summary: States, corporations, and individuals, as well as the anti-trust division of the Justice Department, can have their day against organized medicine under the Sherman and Clayton Acts. The public is protected in spades. There is absolutely no need for the FTC in the health care field, and every reason to suppose its intrusions will harm, not benefit, the public.



Editor's Page

continued from page 21

Graham and Cole and reported in JAMA that year. Dr. Leon J. Menville wrote in the *Clinics* of 1927 on examinations of the gallbladder by Roentgen rays. Tetraiodophenolphthalein was used and excellent visualization of the gallbladder was obtained.

Bubonic plague came to New Orleans in 1926 aboard the Japanese *S.S. Manila Maru*. This vessel had made many stops after leaving Yokohama on July 14, 1926. She had a clean bill of health until arriving in Saigon. There was one case of plague and one death. This was repeated at Singapore, December 1925. Thereafter, there was a clean bill of health until the vessel arrived at quarantine, at New Orleans, on October 25, 1926. The vessel had emptied all cargo in Buenos Aires. No dead rat was found. After leaving Buenos Aires, 12 dead rats were found in late October.

Two cases of plague occurred. These were reported by R. W. Mendelson, Assistant Professor in Tropical Medicine at Tulane. The descriptions of signs and symptoms and autopsy findings were classic.

The vessel, its crew and passengers, were all quarantined. The ship was fumigated throughout, while loaded, with cyanid. (The cargo of coffee was unloaded.) Live rats were found so two additional fumigations with cyanid were carried out. Four hundred and 31 dead rats were found. Of these, 173 were *M. alexandrinus,* 136 *mirottus* and 122 *M. Musculus*. It is deducted that the infestation or plague aboard the vessel came from Buenos Aires, Argentina.

Incidentally, there were 500 steerage passengers from Japan who disembarked in Buenos Aires. All were well.

Everything remains the same; everything changes. Man, his afflictions, his weaknesses are basically the same. His skills and knowledge expand boundlessly. Yes, education is and must be an ever continuing process.

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Country Doctor: He Can't Go Home Again

page 8

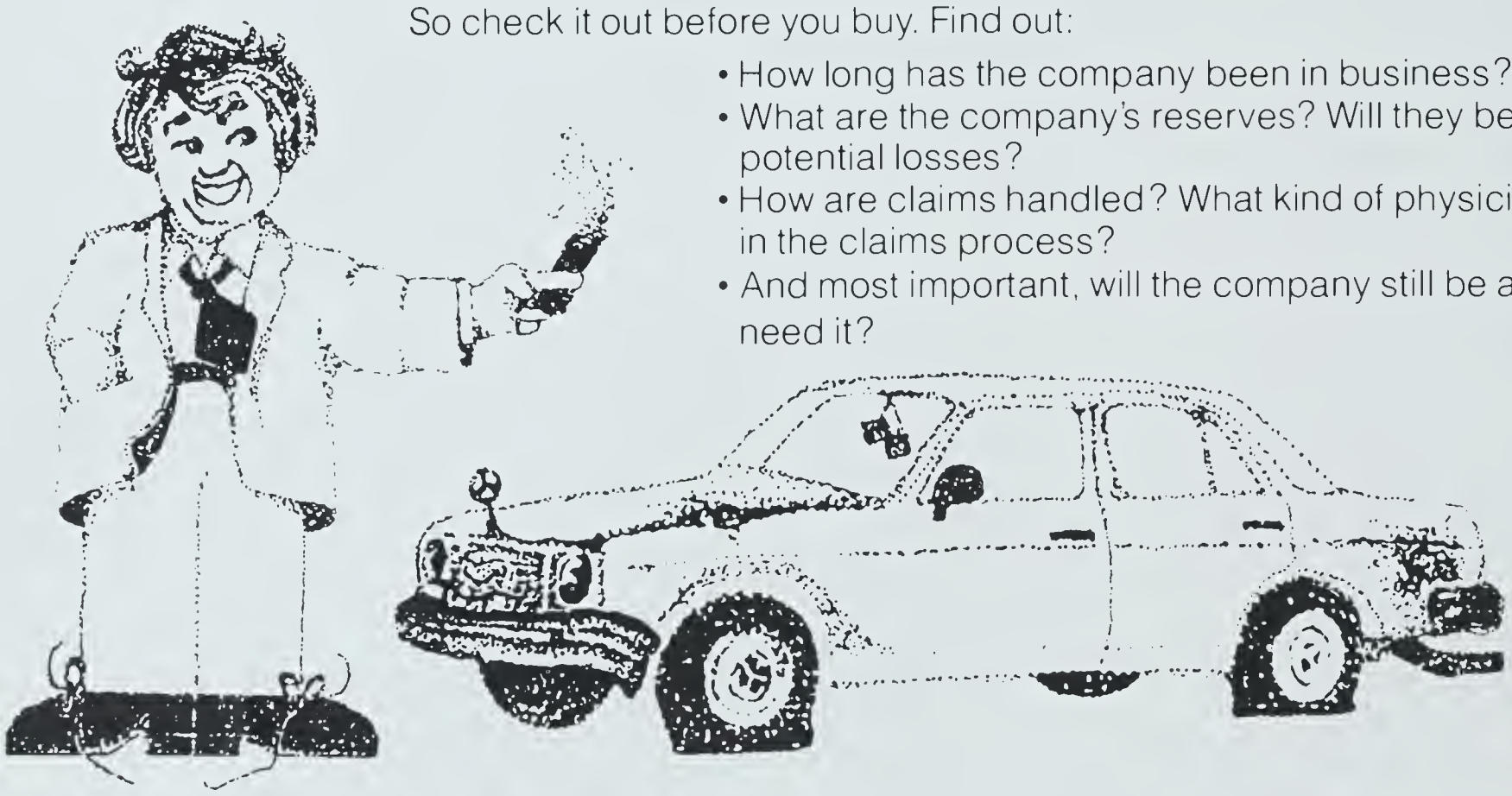
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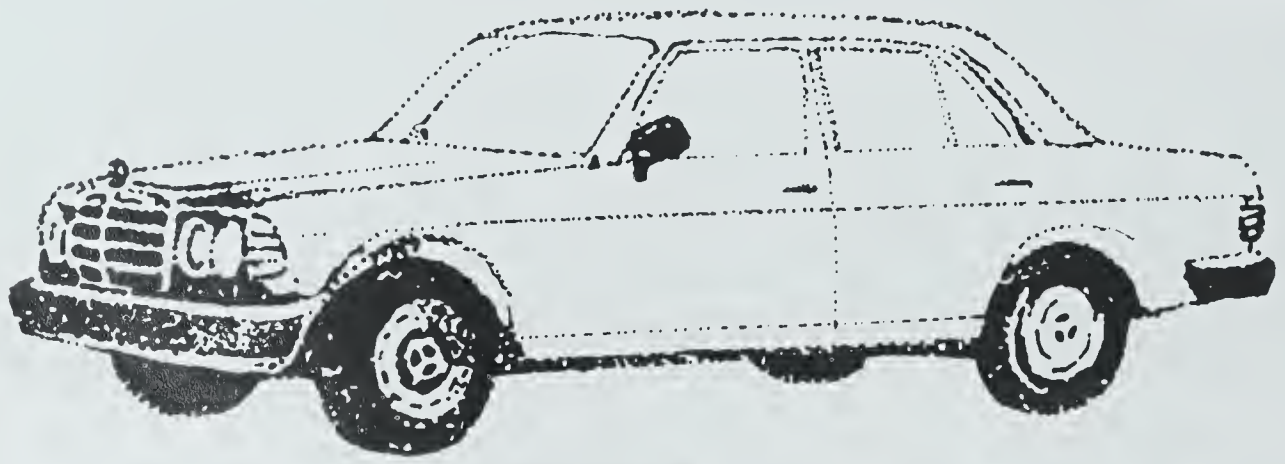
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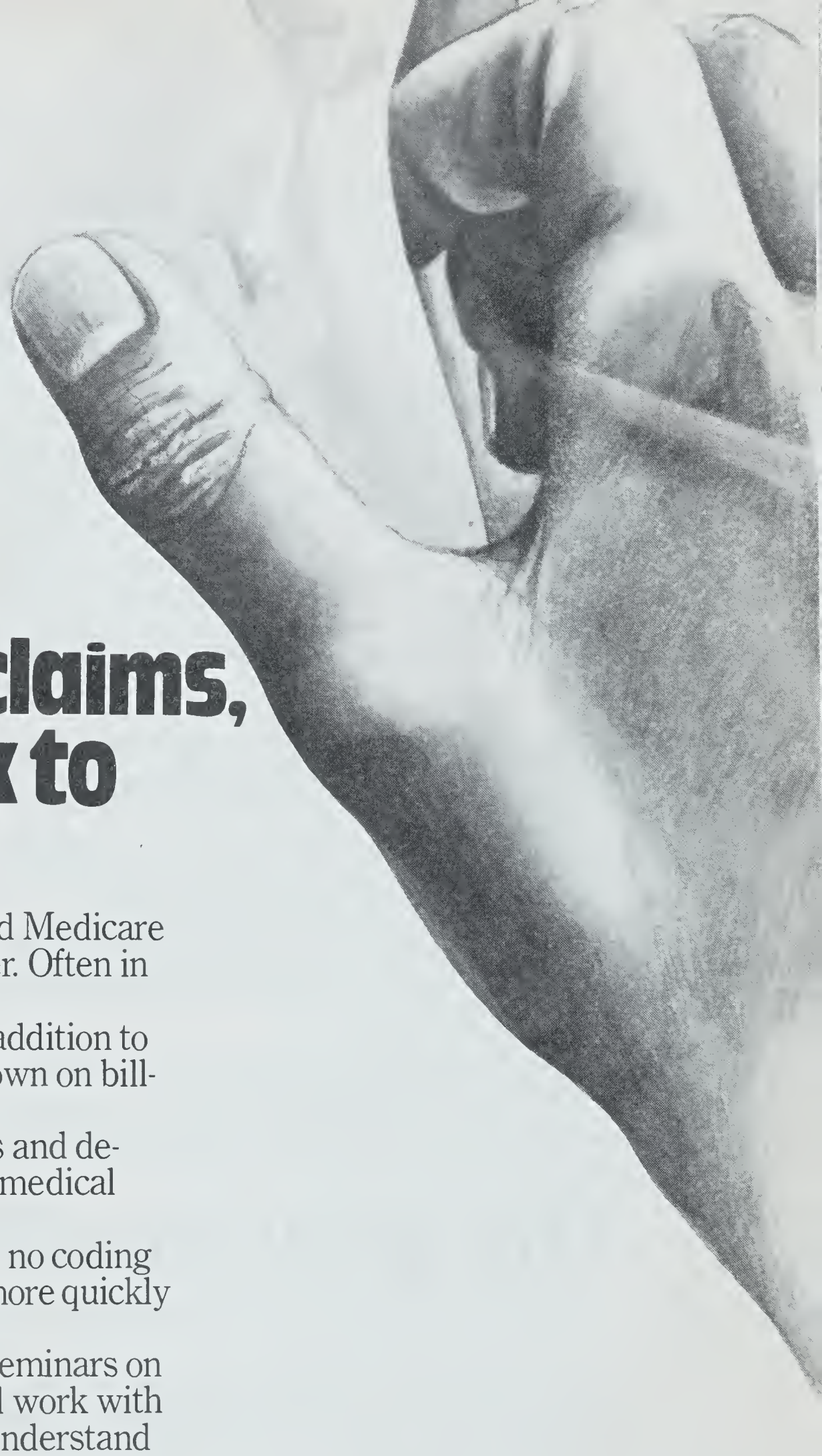
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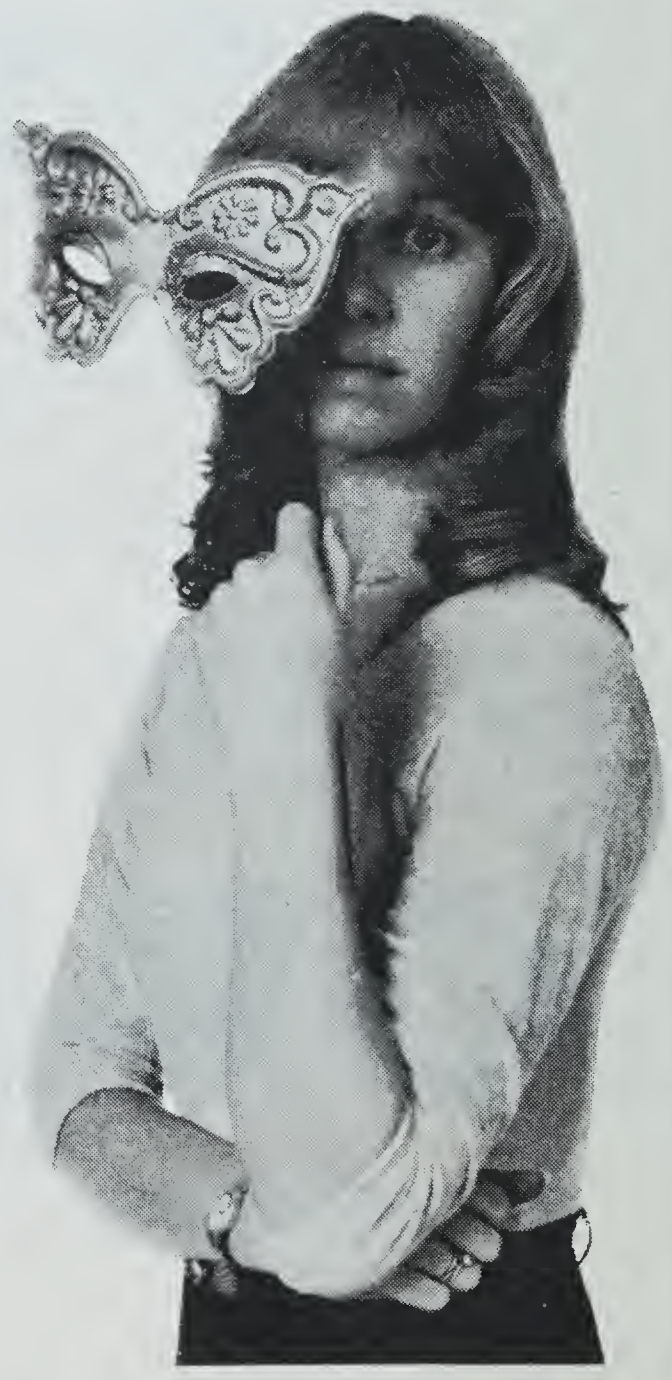
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On the Cover

J. J. Kirschenfeld, M.D., born, educated and raised in New York City, revisits the cottage he and his family still own in Lowndes County. Dr. Kirschenfeld brought Lowndes County medicine from the 19th Century, where he found it in 1946, into the 20th Century. When he left in 1960 to move to Montgomery it was a wrenching experience for him, his wife, and their 4 children, all of whom had found a home in Ft. Deposit, Alabama. Although a part of them will forever remain in Lowndes County, Dr. Kirschenfeld believes the days of the country doctor are no more. Story page 8.

EXECUTIVE DIRECTOR

Medical Sticker Shock



S. Lon Conner
Executive Director, MASA

Scarcely a day goes by that some political figure doesn't pronounce the high cost of health care intolerable, demanding federal action to do something about it.

There is little question that modern medicine is expensive. Modern *everything* is expensive. But Americans experience most other price increases, also the result of rampant inflation, gradually. Every week, for example, we pay more and more for groceries, but it is a comparatively subtle and constant erosion of the dollar that we learn to bear with a stiff upper lip.

It is the cost of big ticket items that is truly traumatic. We don't make such purchases often and have little opportunity to notice the day-to-day inflation that has gone on since we made our last buy years ago.

"Sticker Shock" is the vogue label these days for the breath-sucking experience of shopping for a new car if you haven't bought one for several years. Look at what has happened in just three years.

In that time, the price of gas has doubled, to be sure, but most of these increases were by increments that we learned to adjust to, possibly by driving less. All the time that gasoline was going up so was the replacement cost of the flivver we were driving, but that could be ignored until the time came to take the plunge.

If you last bought an automobile three years ago and went shopping today you would discover that since you shopped in 1979 new car prices have jumped 47%. But it gets worse. In that same period of time, interest charges on new cars soared 54%. The total bill for a financed car has thus gone up by about half in only three years. Thus, sticker shock. One result has been that in just two years the number of multi-car households dropped from 80% to 72%. Brand loyalty, which had been deeply entrenched, has been seriously eroded.

Up to a point, much the same thing happens to many Americans when they become ill. It may have been many years since they have been to a hospital or even visited their physician. So the increased cost occasioned by inflation hits them as if the increase had been sudden. In fact it had been going on all along; the dollar's purchasing power diminished over time.

They are naturally outraged, another example of sticker shock. But the effects are somewhat different. People do not rise up and demand that the government do something about high car prices. But, polls show, those same people feel that the government should, somehow, intervene to alleviate the medical sticker shock.

Up to this point, it might be said that this is merely another example of capricious human nature — to accept one hardship stoically and angrily reject another. But there is a difference, one the medical profession is acutely aware of.

In the case of the new automobile, consumers may elect to put off their purchase. In fact, statistics suggest that the normal trade-in period has been suddenly extended from three years to more than five years. Similarly, some automobiles are not being replaced at all, as families double up to make one do where two were considered essential.

Serious illness, on the other hand, cannot be deferred. The consumer does not have the option of not-buying. It is this very foreclosure of options, along with the common resentment over being ill at all, that adds fuel to the demand for government intervention, in one form or another.

Most physicians are acutely conscious of these pressures to control the finest health care system in the world, with predictably ruinous consequences. They are working to ease these pressures by holding costs down to the maximum feasible extent.

In short, they fear what mass sticker shock over health costs might bring about in a few years. It is, and should be, a grave concern to all of American medicine.

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PRESIDENT'S PAGE

Physician Supply



Ronald E. Henderson, M.D.
President, MASA

The much-feared and often discussed physician shortage of the 1960s has been transformed into a physician glut for the 1980s and beyond. Simultaneously, other health care professionals — such as pharmacists, nurse practitioners, nurse midwives, physician assistants, podiatrists and optometrists — are increasing in numbers at a rate greater than the rate of growth of the general population. The ripples already caused by the sheer numbers are likely to change into waves in the years just ahead.

Government reaction, state and federal, to a possible physician shortage led to increasing the enrollment in existing medical schools, the building of more medical schools and the funding of medical education through capitation grants. The Health Professional Education Assistance Act of 1963 provided construction funds and capitation grants to enlarge the class size in existing medical schools. Amendments to this act in 1965 supported operating costs and created medical scholarships.

With the passage of the Medicare/Medicaid legislation in 1965, the federal bureaucrats warmly endorsed the concept of equal access to high quality medical care as a basic right of citizenship. This rapidly became the new national health care objective; there were three perceived barriers to achieving the objective. These were: 1) an insufficient number of general practitioners and allied health professionals; 2) too many specialists in relation to the generalists; and 3) an uneven geographical distribution of physicians and facilities.

To correct these imbalances, the Health Manpower Act of 1968 authorized funds for medical schools to increase enrollment. The Comprehensive Health Manpower Training Act of 1971 authorized capitation grants to increase medical school enrollment and provide funds for the development of departments of family practice and to increase the numbers of non-physician health care providers. The Health Professionals Education Assistance Act of 1976 declared policy related to an increase in primary care physicians.

While all this legislation was being enacted at the federal level, a grandiose effort was made in Alabama to construct three additional medical schools to give the state a total of four medical schools. Out of this effort, the University of South Alabama College of Medicine became a reality, turning out its first graduates in 1976. In addition, the University of Alabama system was expanded to allow the training of family practitioners during the clinical years in Huntsville and Tuscaloosa.

When I graduated from The Medical College of Alabama in 1962, I had 68 fellow graduates. That figure remained rather constant from 1954 to 1971, the year in which 79 new M.D.s were awarded. In 1982, 173 physicians graduated from the University of Alabama, and 61 from the University of South Alabama. This represents an increase of more than 200%. The population of Alabama increased only 19% from 1960 to 1980.

As was pointed out by Drs. Pittman and Campbell in their outstanding article in the *Alabama Journal of Medical Science* in 1979, there were only 131 physicians completing their residencies in 1980. We will not get the full impact of medical school graduates of 1982 entering the physician pool until 1987.

However, we have already seen a significant impact on the number of physicians in the state of Alabama. In 1963, there were 2,411 active physicians, one physician for every 1,380 citizens. This has increased dramatically since 1976. We now have 4,716 active physicians or one physician for every 825 people.

As recently as 1974 the perceived number of physicians needed for the state of Alabama was 3,414, or approximately one physician per 1,000 population. The physician work force therefore has grown more rapidly than was anticipated, and the rate of increase is accelerating. This is because we are now graduating between 245 and 259 physicians each year. These are young people with all their productive professional lives ahead of them, a group with high expectations.

continued on page 30

Country Doctor: He Can't Go Home Again

William H. McDonald

The wind was cold that February night in 1947 as a tall, intense young doctor from New York City found himself in the middle of the Alabama Black Belt carefully loading a bleeding farm mother into a flatbed wagon for a grueling two-hour trip over uncertain dirt roads to a hospital 20 miles away.

"What am I doing here? How did I get into this?" he asked himself. The 28-year-old physician was a product of the world's largest city. He had received his M.D. just four years before from the cosmopolitan New York University. He asked himself these questions over and over as the wagon's torturous ride brought groans from his patient, whose 7th delivery had not been as easy as the others.

J. J. Kirschenfeld, M.D., could find nothing in his big city background or his education at NYU and Brooklyn College, nor in his internship at Queens College on Long Island that prepared him for the 19th Century. And that's what he had found in Lowndes County when he agreed back in the fall of 1946 to be the county's only doctor for a few months until a permanent replacement could be found for "the old doctor" who had died.

Since his dismayed arrival a few months earlier, "the new doctor," as the wary townspeople called him, had discovered that scientific medicine was unknown in a county where hard-scrabble farming was virtually all that was left of an earlier time, when cotton was king.

Lowndes County, he knew, was in a crescent of dark rich soil that had been deposited like a fertile crescent in glacial times in Sumter, Greene, Hale, Marengo, Dallas, Perry, Wilcox, Lowndes, Montgomery, Macon and Bullock Counties, feathering out in Russell County, just short of the Chattahoochee.

He had known that most of the residents of Lowndes were poor by any national standard, and hardly among the affluent even in rural Alabama.

He had been stationed at Montgomery's Maxwell AF Base for part of his two-year hitch as a flight surgeon, never once entertaining the thought of returning to Alabama to practice. Mustered out with thousands of other medical officers in the fall of 1946, he found that long lines had already formed everywhere he might apply for his residency. He had wanted to get into academic medicine.

In a battered second-hand car, bought at extortionist black market prices at the end of the war, he was headed for California from New York with his wife and one-year-old daughter. Stopping by Montgomery to call on friends he had made while at Maxwell, he was approached about going to Lowndes "for a few months, to help us out while we look for a doctor."

Strangely, he found the idea almost instantly appealing. He was broke, needed a period of capital formation, and finding a residency was out at least through 1947. Why not?

Just Like the Horse Opera

His cultural shock on first seeing the town of Fort Deposit, Alabama, population 800, is recorded in an article he wrote several years ago:

> As we drove off the highway at the railroad tracks and headed into the main street, our attention was riveted to the narrow dirt street paralleling the railroad tracks, flanked on either side by a number of old, dilapidated stores with projecting metal-roofed sheds, under which all sorts of wares were exposed. The day being Saturday, many farmers and their families were in town for the weekly purchases, to exchange gossip and information, and to visit. The town was alive with noise and movement. We were fascinated by the sight of several wagons containing neatly dressed Negro men, women and children, sitting in chairs lined up in the wagon bed. Horses and mules were tied to hitching posts in front of several of the stores. A man, probably the town butcher, was carrying a side of beef on his shoulder, from one store to another, followed by a trail of flies. Farmers in overalls, women in sunbonnets and shawls, numerous children and dogs milled about in the dusty street. Helen and I looked on in amazement at this scene out of the past, something we had seen only in western movies. Our first inclination was to turn back, but we had been invited to dinner, and so we pressed on.

Their host was the drugstore proprietor who had contacted Dr. Kirschenfeld in Montgomery. The druggist had invited the important people of the town for the auspicious occasion. The table in the stately antebellum home was piled high with cornbread, fish, quail, ham, blackeyed peas, grits, biscuits, squash, and the rest. Around the table were the town banker, the car dealer, the owner of the general store, both ministers, several planters, the oil distributor and their wives. Fort Deposit's elite were there, as much to assess the attributes of a "Yankee doctor" as to impress him.

The dinner was cordial and pronounced a success. A tour of the town followed. Dr. Kirschenfeld:

> The drugstore was the stereotype of the drugstore described in novels of the rural South or Far West at the turn of the century. The plate glass store front was shaded by an old metal-roofed shed; the interior was high ceilinged and had oiled wooden plank floors. . . . The few people in the store stared at us curiously. The long, marble-topped mahogany soda fountain ran along the mirrored, panelled wall, while disorganized dusty shelves lined the opposite wall and, high above, ceiling fans whirled lazily.
>
> The pharmacist was a jovial, plethoric Irishman, who kept his bottle hidden behind the assortment of drugs in the small back room. A quick perusal of the medications available revealed such standard items of the day as Elixir of Quinine; Sulfur and Strychnine, Hadacol, SSS, 666, Calomel, Prontisil, etc. There were few if any modern drugs.

He was then shown the doctor's office he was expected to use in the back of the drugstore. The culture shock deepened:

> In the center of the consultation room stood an archaic metal examining table, vintage 1900, well worn and rusted in spots . . . covered by a thin, black oil-cloth pad. A pair of obstetrical forceps, rusting through the peeled chrome, and a few other battered instruments lay on the shelf. These were the possessions of the late doctor who had practiced in this town since graduation from medical school following World War I.

But the office was rent free, and the new doctor was not about to look that gift horse in the mouth for a while. Also, a small apartment was made available to the Kirschenfelds at modest rental. They swallowed hard and determined to tough it out a few months, or until a residency was available somewhere.

They stayed 14 years, loving every minute of the time. The children increased to four. To them, Fort Deposit, Alabama, was home. Another Yankee had been southernized. The Deep South, like China, absorbs its invaders.

They moved to Montgomery in 1960, keeping a charming little cabin by a pond in Lowndes County. Even today, Mrs. Kirschenfeld still longs to return, such being the hold those 14 years of rural practice had on their lives.

Home Delivery, Granny Style

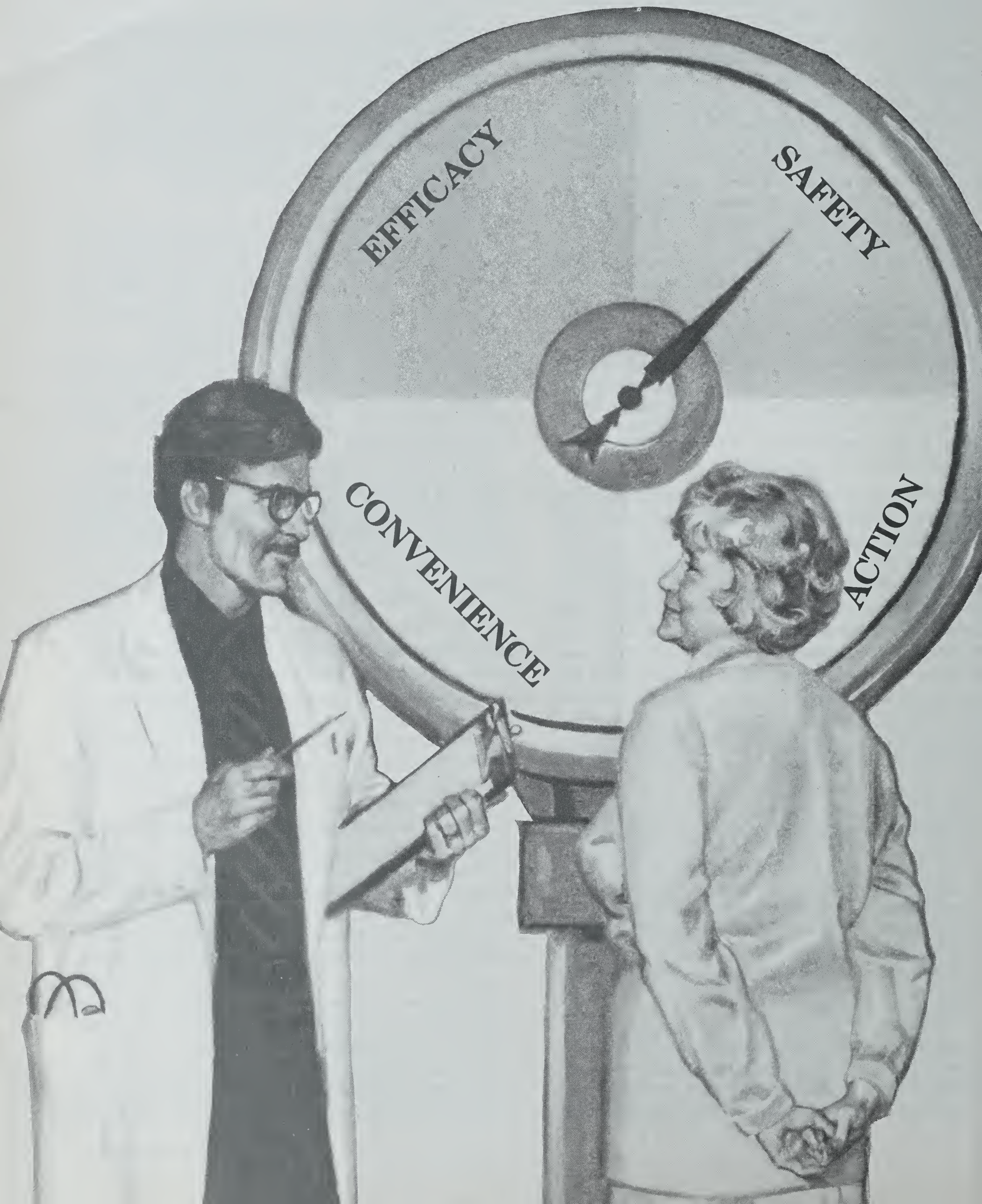
In the early years in Lowndes, Dr. Kirschenfeld delivered babies in the home. Few patients, particularly blacks, were hospitalized for delivery. Most deliveries were performed by midwives, but these "grannies," as they were called, soon learned to call the new doctor because of prolonged labor or other problems. On more than one occasion, he arrived to find the midwife in bed with the mother, black and white, feet to feet, the better to expedite delivery.

Although normally under the supervision of a county nurse, the grannies were rarely checked by anyone, functioning autonomously. Infant mortality, when Dr. Kirschenfeld arrived, was one of the highest in the nation.

Neighbors would usually be crowded around for moral support as the midwife went about her business. The baby was put in a crib, if available, but more often in a cardboard box, well padded and warmed with hot bottles. On one occasion, a two-pound baby was thus transferred to a hospital, and survived.

Post-partum bleeding was occasionally severe, as were other complications. Dr. Kirschenfeld resolved early on to bring Lowndes obstetrics closer to the 20th

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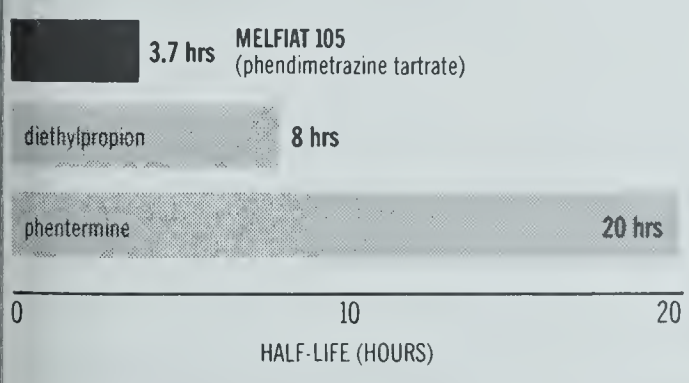


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Half-life comparison of MELFIAT 105 and other anorexiants[2]



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References: **1.** Sheu YS, Ferguson JA, Cooper JR: *Evaluation of the Abuse Liability of Diethylpropion, Phendimetrazine, and Phentermine,* unclassified document ADAMHA, HHS. Office of Medical and Professional Affairs, NIDA, 1980.
2. Douglas JG, Munro JF: The role of drugs in the treatment of obesity, *Drugs* 21:362-373, 1981.

MELFIAT®105 UNICELLES® C III
(phendimetrazine tartrate) Sustained-Release Capsules 105 mg

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MELFIAT® 105 UNICELLES® C III
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INDICATIONS AND USAGE: Melfiat® 105 (phendimetrazine tartrate) is indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class (See CLINICAL PHARMACOLOGY) should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, symptomatic cardiovascular disease, moderate to severe hypertension, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors (hypertensive crises may result).

WARNINGS: Tolerance to the anorectic effect usually develops within a few weeks. When this occurs, the recommended dose should be discontinued. Phendimetrazine tartrate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly.

Drug Dependence: Phendimetrazine tartrate is related chemically and pharmacologically to the amphetamines. Amphetamines and related stimulant drugs have been extensively abused, and the possibility of abuse of phendimetrazine tartrate should be kept in mind when evaluating the desirability of including a drug as part of a weight-reduction program. Abuse of amphetamines and related drugs may be associated with intense psychological dependence and severe social dysfunction. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high-dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG, manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxication is psychosis, often clinically indistinguishable from schizophrenia.

USAGE IN PREGNANCY: The safety of phendimetrazine tartrate in pregnancy and lactation has not been established. Therefore, phendimetrazine tartrate should not be taken by women who are or may become pregnant.

USAGE IN CHILDREN: Phendimetrazine tartrate is not recommended for use in children under 12 years of age.

PRECAUTION: Caution is to be exercised in prescribing phendimetrazine tartrate for patients with even mild hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of phendimetrazine tartrate and the concomitant dietary regimen. Phendimetrazine tartrate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage.

ADVERSE REACTIONS: Cardiovascular: Palpitation, tachycardia, elevation of blood pressure.
Central Nervous System: Overstimulation, restlessness, dizziness, insomnia, euphoria, dysphoria, tremor, headache; rarely psychotic episodes at recommended doses.
Gastrointestinal: Dryness of the mouth, unpleasant taste, diarrhea, constipation, other gastrointestinal disturbances.
Allergic: Urticaria.
Endocrine: Impotence, changes in libido.

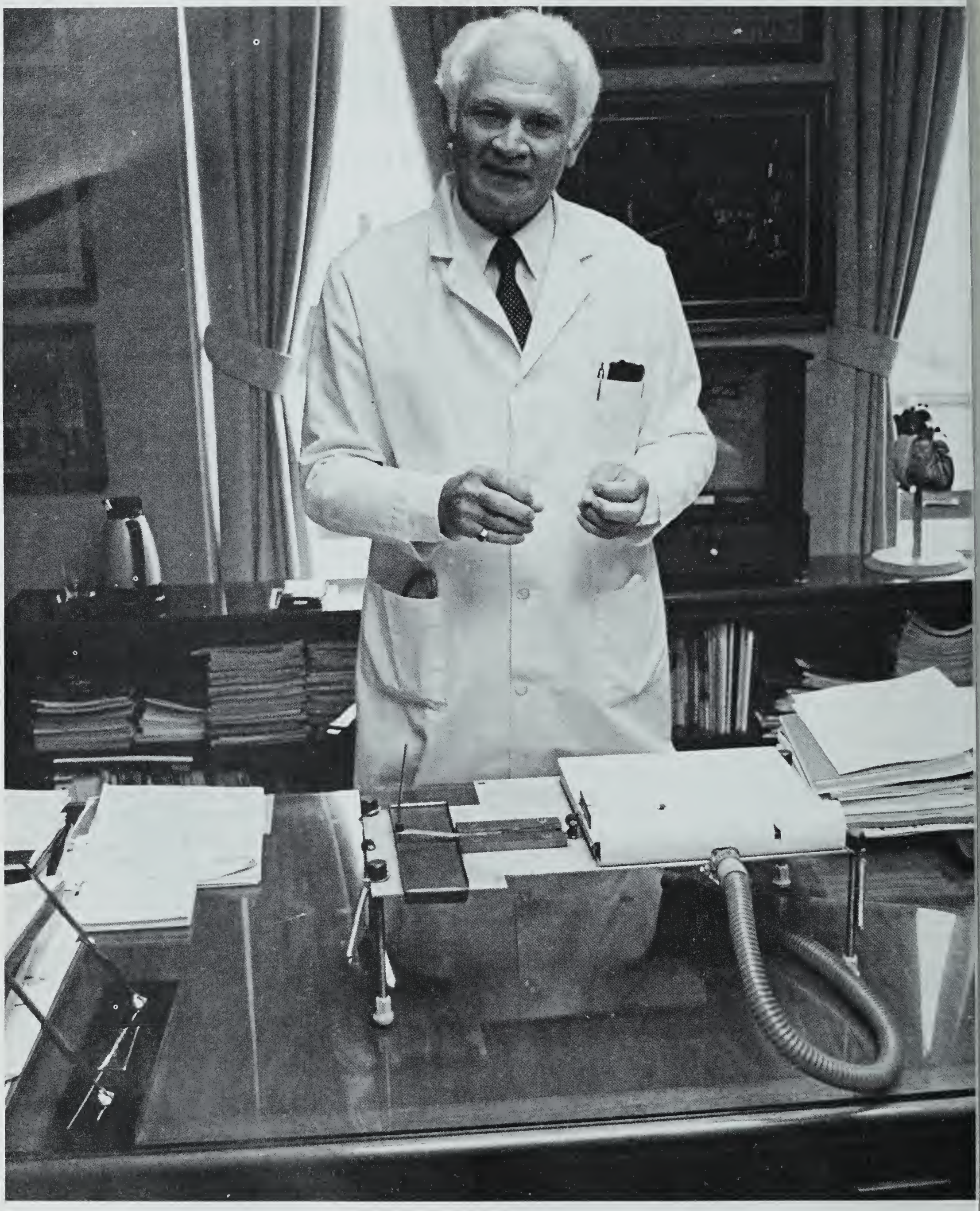
OVERDOSAGE: Manifestations of acute overdosage with phendimetrazine tartrate include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states.
Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma. Management of acute phendimetrazine tartrate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Acidification of the urine increases phendimetrazine tartrate excretion. Intravenous phentolamine (Regitine) has been suggested for possible acute, severe hypertension, if this complicates phendimetrazine tartrate overdosage.

DOSAGE AND ADMINISTRATION: Since Melfiat® 105 (phendimetrazine tartrate) 105 mg is a sustained-release dosage form, limit to one sustained-release capsule in the morning. Melfiat® 105 (phendimetrazine tartrate) is not recommended for use in children under 12 years of age.

HOW SUPPLIED: Each orange and clear sustained-release capsule contains 105 mg phendimetrazine tartrate in bottles of 100.

CAUTION: Federal law prohibits dispensing without prescription.

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When he arrived in Lowndes County in 1946, New Yorker J. J. Kirschenfeld, M.D., had no money, no equipment and precious little else going for him. He built much of his own equipment with the help of a local high school science teacher who resigned his teaching job to become Dr. Kirschenfeld's lab tech, educated on the job by his physician mentor. In his office in Montgomery, Dr. Kirschenfeld demonstrates a pulmonary function machine he and his lab tech built out of junk parts from a phonograph and other bits and pieces including a fishing line and heavy lead sinker. He calibrated his machine at the University of Alabama Medical Center in Birmingham and found it well within tolerances of accuracy.

entury, at a new clinic building he occupied after two ears in the drug store. There he installed a delivery oom and made a bathroom into a nursery, with thermotatically controlled heat, oxygen, etc. Mother and hild were served from a closet transformed into a itchen. The nursing staff consisted of retired nurses or ousewives from the community who volunteered to sit vith patients.

Often, Dr. Kirschenfeld recalls, clay-eating expectnt mothers would sit in his waiting room snacking on lay from a sack brought along to tide them over. Anemia was a prevalent problem; he wrote a number of apers in those years on anemia management in a rural etting.

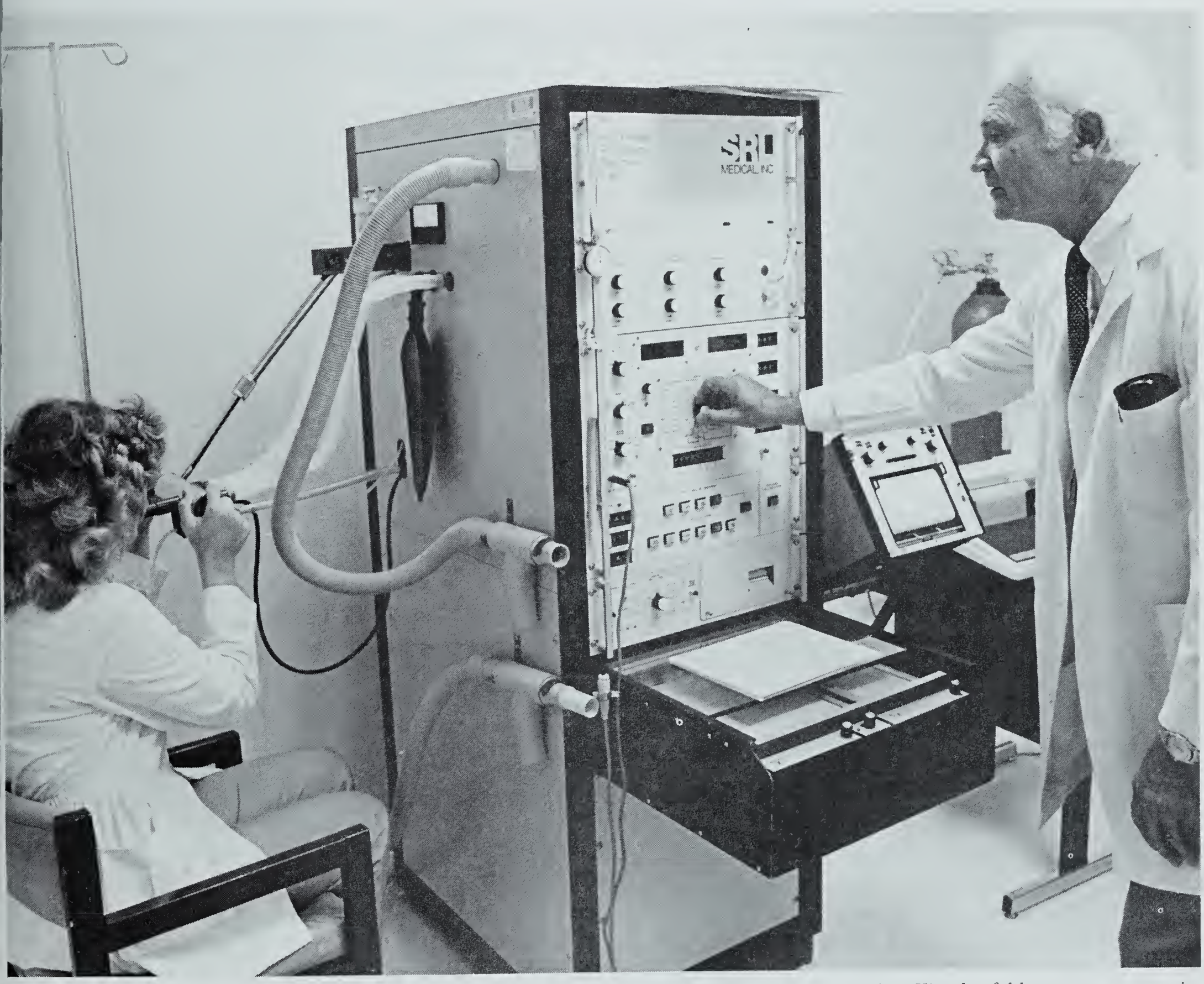
Although he had brought with him only a stethocope, an old sphygmomanometer, ophthalmoscope-toscope and a medical school microscope, he was able o get some equipment and furnishings from a war urplus sale. For a total expenditure of about $1,000, he ought an x-ray unit, desk, chairs, waiting room furniture, an EKG machine, and assorted laboratory supplies — second-hand but functional.

This would do, he figured, for the brief period he intended to stay in Fort Deposit.

In short time, the medical staff had expanded to include a secretary-receptionist, office nurse, a maid, and a lab and x-ray technician. The latter had been a science teacher in the local high school. He resigned to learn lab tech work on the job. Under Dr. Kirschenfeld's tutelage, he was soon doing blood counts, blood sugars, blood urea nitrogen, uric acid, cholesterol and liver function tests — in fact, most chemical tests.

Doctor and lab tech soon began building their own equipment — a bacteriological incubator; a hemoglobin electrophoretic device, constructed from a plastic breadbox with a homemade power supply.

A pulmonary function apparatus was built from scratch, using an ingenious arrangement of fishing line and sinkers, a McKesson bellows, the EKG machine, phonograph parts and other available raw materials. It



He left home-made contraptions behind when he moved to Montgomery 22 years ago. Here Dr. Kirschenfeld uses a computerized pulmonary function machine at Montgomery Baptist Medical Center.

worked well enough to pass muster at the Birmingham Medical Center, where Dr. Kirschenfeld found no appreciable difference in its readings and those of highly sophisticated machines.

Dr. Kirschenfeld and his lab tech collaborated on a number of published medical studies, including the anemias, parasitic disease, hypertension, pulmonary disease, double-blind drug studies and anticoagulants.

His practice covered a radius of more than 50 miles. Some patients began coming from even greater distances to see "the new doctor in Lowndes." After the fifth year, still planning to return for his residency, he began to limit and reorganize his work by insisting on scheduled appointments. The number of house calls to every kind of shack diminished considerably as patients were educated to the greater efficiency of office examination. Patients with severe illness were hospitalized at the clinic. Major surgery and obstetrics, along with major trauma, were referred to specialists in Montgomery.

Citizens of Fort Deposit

Thus within a few years, his practice narrowed to internal medicine with some pediatrics and minor trauma. Diagnostic capabilities were expanded with the addition of x-ray gastrointestinal series, barium enema examinations, intravenous pyelograms and gallbladder series.

Consultants from Montgomery often traveled to the clinic on request. A local car dealer bought an ambulance equipped with oxygen for transport.

He thus became not only part of the community but a leader in it. The warm, interpersonal relationships were a revelation to someone reared in the cold and impersonal atmosphere of New York City. The doctor and his adaptive wife became involved in all civic and social functions. Helen was active in church and school, social and community organizations, and was blissfully happy.

The four Kirschenfeld children became cheerleaders and school princesses. They performed in plays, on teams, and in ballets and bands. After school they rode horses, attended parties.

Life was, as Dr. Kirschenfeld recalls, warm, friendly, leisurely and secure.

He joined the Chamber of Commerce, Civitans and other community groups. Within a few years, he was elected to the city council and was named "Man of the Year" by the Chamber of Commerce. He spearheaded a successful drive to build a new municipal sewage system.

By custom, Fort Deposit closed down every Thursday. Soon, the new doctor and his wife were taking a partial holiday as well, going to Montgomery to shop and dine, sometimes a movie. His clinical staff by then was well trained and had a list of consultants for referral in emergency situations. They were trained in resuscitation and first aid, had been taught to triage, either contacting him or transporting patients to an appropriate specialist in Montgomery or to the emergency room.

After eight years of intensive practice, keeping current with internal medicine and contributing to the literature himself, he read somewhere that the American Board of Internal Medicine had adopted a grandfather clause whereunder someone who had been in practice as long as he, who practiced primarily internal medicine, was eligible in certain special situations, with peer approval, to take the examinations in internal medicine for certification.

About this time, he had started weekly trips to the medical school in Birmingham. He knocked on doors, learned what was going on, studied his Harrison and passed his boards in 1956. UAB then gave him an appointment in the medical school as a faculty member, teaching once a week and making rounds with the residents.

Of course, this obviated the need "to return someday" for his residency. The Birmingham medical center and academic medicine fascinated him. He engaged a black man as a chauffeur and was thus able to study on the way to Birmingham via old Highway 31 and returning home, a distance of 130 miles one way. To make rounds at 8 a.m. at the medical center, he had to leave Fort Deposit at 4.

From 1956 on, the itch to get into academic medicine simply grew worse. "I felt that as long as I stayed in Lowndes I could never develop an educational program by myself," he recalls.

In 1960, he decided to make the break. His wife and the children had to be dragged kicking and screaming away from their Black Belt home. Even today, 22 years later, they miss the life they loved.

After a few years in Montgomery, the county society formed a committee including Dr. Kirschenfeld and H. Hamilton Hutchinson, M.D. (President-elect of MASA) to make plans for a postgraduate medical education program. At first it faltered. Montgomery had never had such a residency program. In the beginning the program could get only medical students coming to Montgomery on an elective. In 1974, the program was accredited, but the only residents that could be recruited were FMGs.

Why would any other young M.D. elect this program? In time, however, word got around that it was the kind of residency program that offered unique advantages in community medicine, using three hospitals separate from the academic setting.

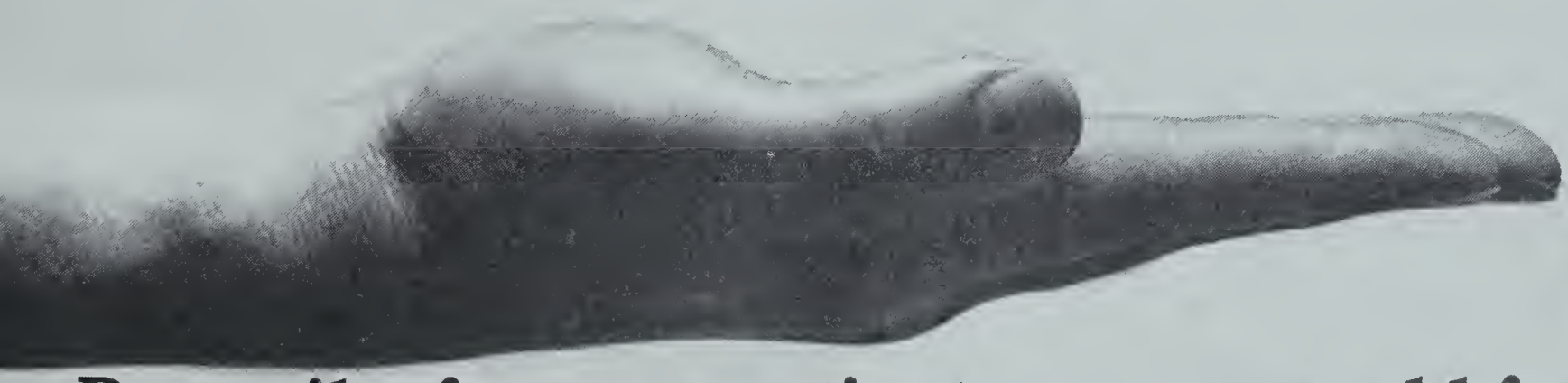
There are 14 residents in the program as of last July 1, with only two FMGs and the rest Americans.

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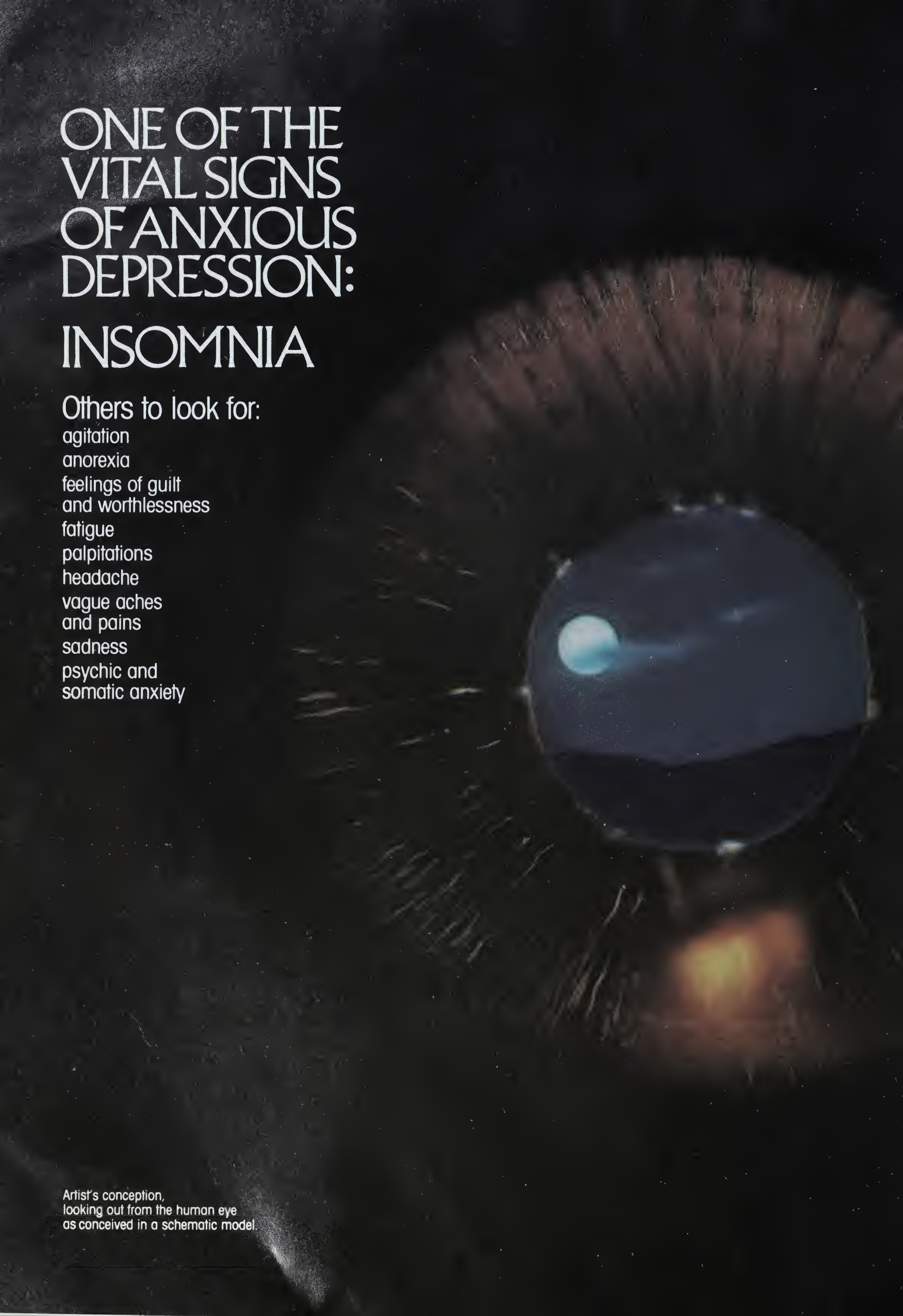
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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.
Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased to six tablets or decreased to two tablets daily as required.
Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10, Prescription Paks of 50

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"We train a resident for about $25,000 a year," Dr. Kirschenfeld says. "The national average is $60,000 a year." However, it may be necessary in a year or so to recruit a full-time faculty member and perhaps a second after that.

Every Friday, there is a visiting lecturer from Birmingham, Mobile, Emory or Nashville, who spends the day with the residents, holding grand rounds. The variety of exposure, Dr. Kirschenfeld believes, is "much more than you get in any university." He continues:

"We are earning the reputation of turning out residents who are practical doctors, internists not really interested in academics as such but who want to get into the front lines and practice good internal medicine."

Thus, in the past 38 years, Dr. Kirschenfeld has seen medicine from several perspectives — military medicine, rural practice from what was really a primitive beginning right on up through modern medicine, city practice, academic medicine.

The following interview concentrated on this unique experience:

Q. *"I gather from some of your articles that you do not see any mass movement back to the rural areas for physicians — even if there is a surplus?*

A. "There's no way, because of the nature of medi-



Dr. Kirschenfeld, UAB Professor of Medicine and head of what is said to be the only fully accredited residency program with a part-time faculty, teaches his residents in Montgomery the paramount importance of the physician's mind, heart and knowledge over any machine.

cine today. Back when I started in '46, medicine was just beginning to get into the golden age. Penicillin was not even available yet. I was really practicing out of my bag and I could do that without feeling insecure. But with all the sophisticated stuff going on, doctors come through medical school and residency training used to all this. Not too many would want to go to a really small town like Fort Deposit. They might go to a city of 10,000 to 20,000, providing it is fairly well equipped.

''We may never solve the problem of the rural hamlet; the trend is to a medium-sized city in search of a doctor. However, there is a way to provide for the needs of rural areas, and you could kill two birds with one stone doing it:

''Medical schools could train their residents better *and* solve the rural problem. A program could be established whereby a rural community could raise the money to build and equip a clinic. The community would sponsor a couple of their bright young people to learn to be a lab tech, nurse, bookkeeper. The community, with help, would run the clinic and staff it. The medical schools would provide a resident and a medical student, on three-month rotations, living in a trailer or other housing furnished by the community.

''Their expenses would be paid by the community, which would collect all fees at the clinic. The medical schools would provide a traveling faculty to visit each of the clinics once a week, spending the day. The clinics would have telecommunications hook-ups to transmit x-rays, EKGs, lab reports, to the medical school where this would be interpreted and be ready for consultation.

''This plan would do two things: it will give young people tremendous experience, show them how to take care of people in these situations, free them from the ivory tower for a period, but under good supervision. And it would help solve the rural health problem.

''The little clinics would be coordinated with regional centers, like Montgomery. Transportation could be provided by helicopter or some other. The plan would provide primary care at the rural community level. Secondary care would be provided in the regional centers. Tertiary care, where needed, would be in the medical school.

''Ninety-five per cent of the problems could be taken care of in the clinics. The regional centers could take care of most of the rest. And the medical school would get the really complex cases.

''The communities would make a profit, even after paying a certain amount to the medical schools for providing the residents and the medical students. I think everyone would benefit.''

Q. *''Is modern high tech medicine largely responsible for the vaunted health of the American people?*

A. ''High tech cures 5% or less. They are the ones getting the superb medical care. But much more important is how people live every day, what they eat. And medicine really can't go much about that. What is killing adults is cigaret smoking, alcohol, obesity, lack of exercise. If we can make a dent in that, our high tech could be used for people with unusual diseases, a small number compared to those who are killing themselves with poor living habits, in spite of the fact that we are spending more money than any country in the world on medical care.

''We are not doing a hell of a lot for the mass of people, really improving their health. The reason we are healthier as a people is mainly that food is available and infectious disease has been wiped out.

''If you look at the data, the average length of life has increased tremendously because children are not dying, young women are not dying and young people in general are not dying, except in accidents. With infectious disease largely gone, you find women living to 75 and men to 68 or 70, or something like that.

''But if you take the number of people living longer, we really haven't done much. When you pass 45, your chances of living to 75 are probably about what they were in 1900.

''The average has improved that that's because the children and young people are not dying — and that's mainly public health, immunizations, better nutrition and all that.

''I think the Reagan Administration has gone wild, cutting back on public health, which is the key to it. In the long run, that is going to cost more, 10 or 15 years from now. Research, like public health, is being cut back and both will be set back a long way. It is really shortsighted.''

Dr. Kirschenfeld is critical of disproportionate expenditures at both ends of life, mentioning the number of people in hospitals who are over 75 with various problems but with little actual medical care beyond the custodial. End stage renal dialysis is another program that has become exorbitantly expensive, he says:

''Everybody, sooner or later, at the end of life, is going to have kidney failure. So where do you cut off? Normally, all their organs will be wearing out and they really need to be allowed to die — until science figures out what makes us age, and we can try to prevent that deterioration. Hooking people up to machines is a miserable life.''

Q. *''On the subject of health care costs, then, what would you do, if you were emperor, to re-allocate national resources?*

A. ''First I would beef up public health, also medical school and residency training, with the emphasis on prevention: talking to people, counseling, learning to relate to people rather than trying to discover the rare disease or solve a puzzle, which is the way medicine is really taught.

''I would also do what I mentioned about providing primary care in rural areas. These would become centers for preventive care, education, prenatal care, im-

munization. The community would come to know that this is the place to learn about medicine, where they can get whatever help they need. It would become the nucleus, very much like the police and fire departments.

"I would also beef up regional centers by designating them responsible for a surrounding area. I would spend a fair amount of money on communication and transportation, helicopters rather than ambulances. Brookwood and Carraway are doing this but it is not a uniform system. It's spotty.

"Something I don't like to see happening in medicine is big business moving in and buying up the hospitals. The government has left a vacuum. Big businesses are run for profit. They cut corners. When they buy up a hospital, they insist that referrals go there.

"We're developing, by default, a business-oriented social system, and there will be a lot of problems. You can't run a medical system based on income. There are too many cracks for people to fall through.

"Medicare and Medicaid didn't solve this. They're wrong to begin with because they're cost-plus and that never works very well. The hospital doesn't care about economizing. What do they care? It's all part of the expense. Then they tack a profit on it. And they encourage extravagant machinery for the same reason, and anything else. Most hospitals are run very badly.

"I guess the first thing I would do, as emperor, would be to end cost-plus. But I'm afraid the costs are getting so astronomical we are going to end up with a huge cutback of many services that are really needed in an economy move.

"Or it is going to get so prohibitively expensive, the government is going to put everyone on salary and make it a social system, as happened in England, Sweden and other countries. Even if you have a conservative Republican majority, when they look at the whole thing, they throw up their hands. These are true dangers. If it happens, it will be a disaster.

"Americans have a bad habit of never solving a problem. They'll have commissions. They'll have long reports, 10 volumes long, which nobody reads. And then they throw money at it. You have to get back to basics. And I think doctors need to get back to basics too. We're teaching that philosophy in the residency program. It's so easy to write a lot of orders on the charts. In his training, the doctor has always been criticized for missing anything. On top of that is the malpractice fear of missing something. If we can teach residents to take the responsibility — if you get sued, you get sued. I've never been sued in 36 years of practice and I've taken all kinds of risks because down in the country I took care of everybody. If you communicate with people, talk to them, show them you are interested, they are not going to sue.

"Those who sue are the ones who have been abandoned, or think they have been, or who feel the doctors are not interested. We can teach doctors to assume responsibility, aware that they are not always going to be perfect, with 100% results every time; that, fortunately, patients get better in spite of us many times.

"Try to leave them alone as much as possible. First do no harm. Don't do things that promise only immediate weak benefits. If you think a GI series will show something, then do it. But if it's just to rule something out, I think it's worthless, because you are not going to find anything.

"So by stressing a more practical, logical approach to people and patients, we must think in terms of whether the patient should be put through the tests when the yields will be so low. Give it a few days and see what happens.

"We have got so sophisticated we don't think, sometimes, in terms of what we are accomplishing. And





Dr. Kirschenfeld believes that high tech medicine is a wonderful godsend to that 5% of the patients who really benefit by it.

there is a lot of reaction to drugs, which often are not necessary or wise.''

Q. *''What will happen if the doctor surplus, predicted by GMENAC, materializes? Will physicians continue to stack up in the larger cities?*

A. ''This I fear. In Alabama we are going to be turning out 240 doctors where we were turning out 65. We have quadrupled the supply. The state will be saturated. In addition to these 240, we still get 50 or 60 every year from out-of-state. So we are going to have a tremendous surplus of doctors.

''What will happen to them? Logically, you might say, they will percolate down to the smaller areas. A few probably will, but there are still going to be problems with making this move, and you will find more and more in the cities. Montgomery will be saturated. We gained 25 doctors last year, 25 the year before, where we used to gain one or two per year.

''If this continues, Birmingham, Mobile and Montgomery will have problems. In the state of Oregon there is now one doctor for every 400 people and they are crying, 'Please stay out.' It's getting vicious.

''The fallacy, one the public and the government make, is that it will be cheaper if you have more doctors. That's not so. Each doctor will be trying to maintain his standing. After all, he writes the orders. So he'll write *more* orders. He can order x-rays because there *might* be something wrong; or take out the appendix or the gall bladder because that *could* be the trouble — and the fee doesn't hurt either.

''So it is not going to be cheaper having more doctors. The hope is that they will go to areas that need doctors.''

Q. *''You mentioned back-to-basics. Could you amplify that?''*

A. ''Well, one thing is taking the patient's history. If I were limited in time, I would rather have a good history and not put a hand on the patient, let somebody else do the physical. The physical gives me much less information. After I've talked to a patient for an hour, I've got a pretty good idea what's wrong with him.

''After I examine the patient, I fill in the gaps. If I still don't have the answer, I go to the lab.

''But so many times these days, all this is reversed. The nurse takes a check list, which is worthless, doesn't mean a thing to me. Then the patient is run through a whole barrage of things, measuring this and that, automatically telling you this and that. The doctor ends up being the last individual the patient sees. And the doctor looks over a bunch of papers and print-outs on his desk and says, 'Hmmm, you've got high blood pressure.'

''That's not the way to practice medicine, like a computer. They even have computers now that talk to patients.

''Figures can lie, they can be deceptive. The blood calcium may be a little high because the machine was off. The approach should be never to make a diagnosis on a laboratory basis. Make your diagnosis *initially,* and let the lab help you confirm it. If the lab disagrees with your impression, throw out the lab and repeat it.

''This was Tinsley Harrison's approach. He and the old masters were great. They didn't have all those machines, so they used their senses and their feeling and their intuition, and they were right almost invariably.

''With this explosion of technology we are making diagnoses on lab findings more and more. This leads to a lot of trouble. Sometimes you get a wrong figure, and before you know it you are putting the patient through all kinds of things that were unnecessary to begin with because you depended too much on the lab. Leave your sophisticated stuff for the 5% who really need it.''

Q. *''But isn't there pressure from hospitals to use all that sophisticated equipment?''*

A. ''In some hospitals your privileges depend on the number of admissions to the hospital, and that's bad. They keep a roster. The ones who put the most in are the best friends and they get better treatment, which is very bad. Hospitals have become businesses and big business coming in is making it worse.

''If I had one stroke I could make, one thing I would do to change things, I would cut out cost-plus immediately. That would stop a lot of problems and make the hospitals earn their keep. If they lose money, 'That's tough, baby, you're in business.'

''There is enormous waste in some hospitals. I would begin cutting these bit by bit, trying to remove the built-in incentives for extravagance. You would not be cutting care; care would be identical.

''I've seen hospital administrators' offices with reception rooms bigger than my whole complex here, and the public is paying for that.''

Dr. Kirschenfeld is writing a book about his Lowndes practice which may be extended to such beliefs and criticisms as he has of misdirections in modern medicine.

For himself, he says his annual physical consists of a ski trip to a site at 12,000 feet:

''I'm cold, I'm tired, I'm scared, and there isn't enough air to breathe. But I don't have a heart attack. I figure I'm good for another year.'' ⊡

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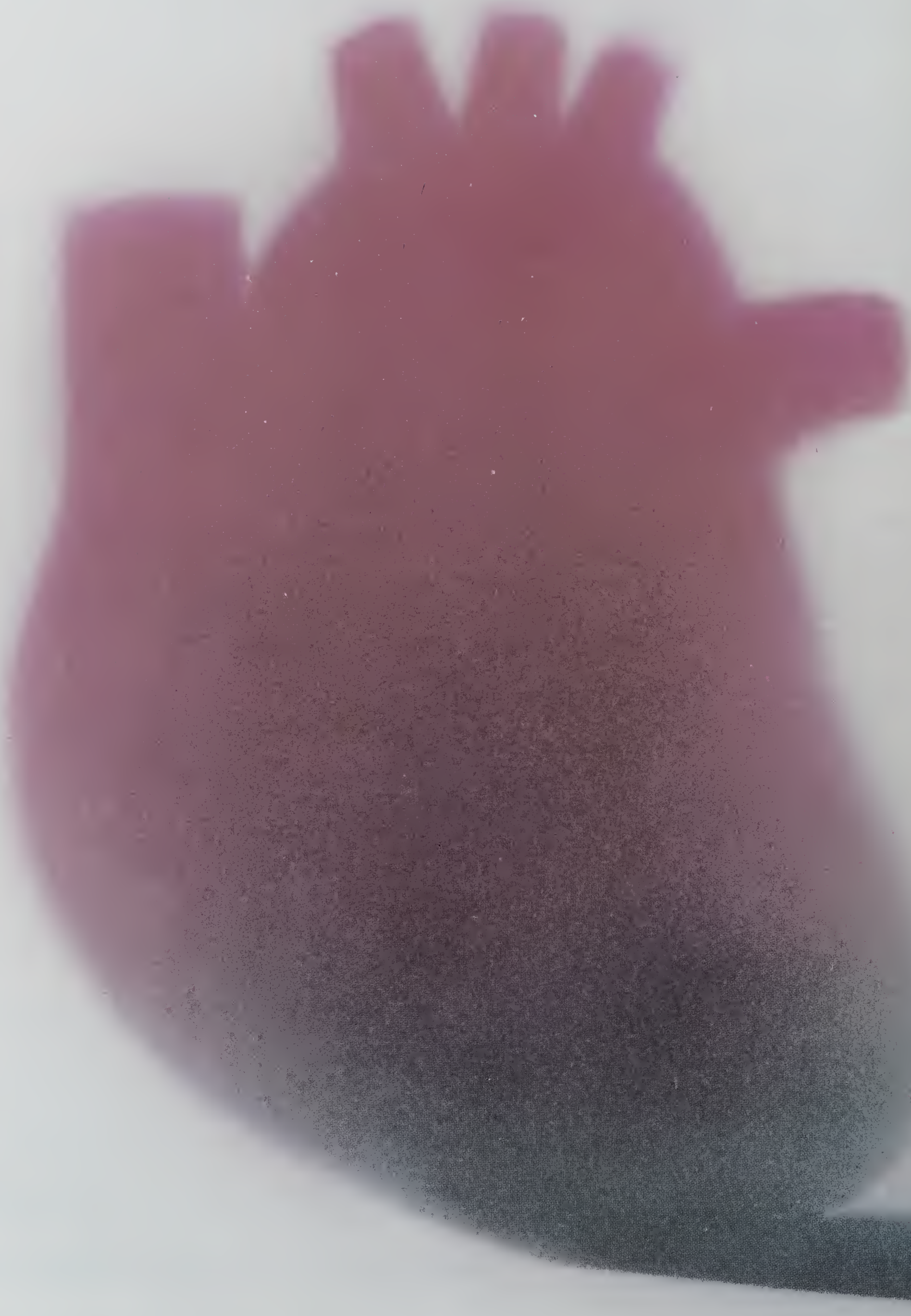
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1) bronchial asthma, 2) allergic rhinitis during the pollen season; 3) sinus bradycardia and greater than first degree block. 4) cardiogenic shock; 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless it is secondary to a tachyarrhythmia treatable with propranolol; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE. In congestive heart failure, inhibition with beta-blockade carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. In patients already receiving digitalis, propranolol may reduce the positive inotropic action of digitalis and may have an additive depressant effect on AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, in rare instances, cardiac failure has developed during propranolol therapy. At the first sign of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and closely followed until threat of cardiac failure is over.

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following a*brupt* discontinuation of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised. Give special consideration to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Propranolol should be withdrawn slowly, since abrupt withdrawal may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta-blockade impairs the ability of the heart to respond to reflex stimuli. Except in pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery. In case of emergency surgery, the effects of propranolol can be reversed by administration of beta-receptor agonists such as isoproterenol or levarterenol, but such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e.g.*, CHRONIC BRONCHITIS, EMPHYSEMA), administer with caution, since propranolol may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta-receptors.

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA: Propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia, especially in patients with labile diabetes. A precipitous elevation of blood pressure may accompany hypoglycemic attacks.

USE IN PREGNANCY: Safe use in human pregnancy not established. Embryotoxic effects have been seen in animals at doses about 10 times the maximum recommended human dose.

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if propranolol is administered, since it may occasionally produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

Observe laboratory parameters at regular intervals. Use with caution in patients with impaired renal or hepatic function.

ADVERSE REACTIONS

Cardiovascular: bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type; thrombocytopenic purpura. *Central Nervous System*: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. *Gastrointestinal*: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis. *Allergic*: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress. *Respiratory*: bronchospasm. *Hematologic*: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura. *Miscellaneous*: reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta-blocker (practolol) have not been conclusively associated with propranolol. *Clinical Laboratory Test Findings*: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

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There will be some positive fallout from the additional numbers of physicians. Generalists as well as specialists are already going to previously under-served areas. By 1990 the geographical mal-distribution of physicians should be of historical interest only. There will be more physicians entering family practice as well as other fields which have experienced manpower shortages.

Physicians will again be attracted to investigative fields. In the past 20 years fewer and fewer M.D. graduates have elected to stay in basic research. As the discrepancy between income from clinical practice and that of academic medicine narrows, basic research will again become more attractive.

The negative effects will far outweigh the positive, however. With the present mechanism of funding, additional physicians will increase the total cost of medical care. The combination of excess hospital beds, a physician surplus and available third party reimbursement will definitely cause unnecessary hospital admissions, diagnostic tests and surgical procedures. Excessive medical care will result.

The physician's image is likely to suffer, because it will truly be a buyer's market. The entrepreneurs are already attempting to profit by the physicians' earning potential. *Time* magazine spotlighted Mr. Doughnut leasing vacant fast-food facilities in shopping centers and placing a physician in these facilities. They rapidly earned the handle "Doc in a box."

The physician glut represents a real threat to the private practitioner's independence and his privilege to work for the patient and not some third party. Physicians will be pushed toward accepting salaried positions with hospitals, closed paneled HMOs, as well as governmental agencies.

Solutions to the physician surplus will be slow in coming and difficult to implement. The American Society of Internal Medicine has recommended the following steps to curb the oversupply of physicians while assuring accessibility to medical care:

- Decrease the number of medical school entrants on the basis of state and local market demand rather than by federal mandate. (The GMENAC recommendation was an across the board 17% decrease immediately.)
- Eliminate federal capitation grants and other direct financial support to medical schools while continuing to assure an adequate supply of clinical investigators through research and training grants.
- Continue to deny favorable immigration status to foreign-born physicians.
- Restrict the entry of foreign-born medical graduates seeking postgraduate medical training to those committed to return to their country of origin.
- Evaluate graduates of foreign medical schools who are U.S. citizens on the basis of the residency training of each.
- Establish a national private sector committee to study the situation caused by U.S. citizens studying in foreign medical schools.

I would add to this list for Alabama a statewide effort to ascertain our physician manpower needs and to curtail immediately the number of entrants into the medical schools at the freshman level to an appropriate number. The medical care needs of the people of the state rather than the manpower needs of departmental chairmen must get preferential consideration.

The time for action is now. The 6-10 year pipeline dictates immediate action. Real and severe problems caused by the physician glut will occur even if we act today. But we are still going in the wrong direction. As recently as July 1981, the federal government provided a two-year school of medicine a $2.6 million grant to become the 127th and newest four year medical school. This was absolutely unneeded. Actions such as this must be loudly and effectively protested. ⊡



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Efficacy and safety in a broad range of patient types.

Over 2000 clinical trials involving more than 10,000 patients have shown that Dalmane patients fall asleep sooner, sleep longer and experience fewer nocturnal awakenings.[4] The safety and efficacy of Dalmane have been demonstrated in medical and surgical hospitalized patients, in patients seen in office practice and in elderly patients.[5-8] Since the risk of oversedation, dizziness, confu-

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sion and/or ataxia increases with larger doses in the elderly, it is recommended that the dosage be limited to 15 mg.

Moreover, the efficacy and safety of Dalmane for the treatment of insomnia have been demonstrated in thousands of patients with a variety of primary medical conditions, including cardiovascular, neuropsychiatric, endocrine-metabolic, gastrointestinal, genitourinary, respiratory and musculoskeletal disorders.[1] Dalmane (flurazepam HCl/Roche) is contraindicated in pregnancy and in patients hypersensitive to the drug.

Avoids rebound insomnia upon discontinuation.

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References: **1.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **3.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther 21*:355-361, Mar 1977. **4.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **5.** Meyer JA, Kurland KZ: *Milit Med 138*:471-474, Aug 1973. **6.** Feffer HL, Gibbons B: *Med Times 101*(8):130-135, Aug 1973. **7.** Jacobson A *et al*: *Psychophysiology 7*:345, Sep 1970. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 1978. **10.** Kales A *et al*: *JAMA 241*:1692-1695, Apr 1979. **11.** Monti JM: *Methods Find Exp Clin Pharmacol 3*(5):303-326, 1981.

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Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

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The Federal Government and Health and Human Services: A New Look

Congressman William L. Dickinson, (R-Ala.)*

As a lawyer I always approach a group of physicians with great care — a form of ''doctor phobia'' that we lawyers have. As a politician I know that you don't speak to a group of professionals about the intricacies of their business. So I don't intend to talk to you tonight about ''doctoring,'' but about a related subject which I hope will be informative for you — the philosophy, program and results so far of the Reagan administration in the area of Health and Human Services.

Recently, Secretary of the Department of Health and Human Services (HHS), Dick Schweiker, was being interviewed on the CBS Television Network by journalist Dr. Jane Bryant Quinn. This interview typifies the current national media preoccupation with the theme that the Reagan administration is being stingy, cruel and harsh when it comes to delivering health and human services to America's needy.

In the interview held on CBS-TV on Feb. 11, 1982, on their morning news show, Ms. Quinn said to Schweiker: ''Philosophically, do you think it's right that (human resources) programs should be cut at a time when military spending is growing?''

Dick Schweiker replied that the HHS budget will go up $20 billion this year. The Medicare/Medicaid budget will increase by $4.5 billion.

Still not giving up Quinn said: ''Are you supportive, however, of the change in direction where more money should go to defense and less money should go to human services?''

And Schweiker answered: ''My budget's the third largest in the world. I'm ahead of any other government except the Soviet Union and the United States, and I have $56 billion more money to spend than the defense department. So I haven't exactly been short-changed, and I think you can debate the issue, but $56 billion ahead at this point is not bad.''

Now that figure is in outlays for FY'83, but you have to admit we're not talking about *cuts*. I still don't think Jane Bryant Quinn or CBS is convinced.

Why should they be? It's much easier to paint dramatic pictures of budget *cuts* than to accurately portray what's happening.

The plain, unarguable fact of the matter is that we are spending more of the budget on human resources and less of it on defense than we were 20 years ago! And yet we hear these stories about being heartless.

In fiscal year 1962, when John F. Kennedy was President, we spent 45.9% of the budget on defense. In FY 1982 under President Reagan we'll be spending only 25.8% of the budget on defense. And in FY 1984 that figure will rise only to 31.4%, much below what we were spending in the New Frontier.

What about human resources?

Let's look at the facts:

In FY 1962, under President Kennedy, 28.8% of the budget was devoted to human resources. In President Reagan's FY '82 budget, 51.9% of the budget will go to human resources. And down the road in FY 1984 that figure will *still* be 50.2%.

But to hear the media tell it, the Kennedy-Johnson years were the good old days for human resources!

* Speech to the Montgomery County Medical Society, Montgomery, Alabama, May 3, 1982.

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Usage in Pregnancy Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions

Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions

The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

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Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

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What are some of the actions of the Reagan Administration in the area of health-human services?

During 1981, hospital costs rose at a rate of 19% — a faster rate than general inflation in the country. As a consequence, wellness — keeping Americans healthy instead of just treating them after they get sick — became a higher priority. At the National Institutes of Health (NIH) that means more prevention research; at the Public Health Service (PHS) it means working with medical schools to get more prevention included in the curriculum; meanwhile, HHS has cooperated with groups such as the Red Cross and the Ad Council to teach the public about staying healthy . . . while building on the more than 400 private firms that offer wellness programs for their employees. A particularly bright spot has been the cooperation with food manufacturers to improve sodium labeling for consumers.

A second step is a search for ways of encouraging cost-conscious behavior in the health marketplace to permit greater consumer choice of health coverage and competition to keep prices lower.

The National Institutes of Health have historically funded important health research leading to dramatic advances, such as declining death rates from heart disease, new drugs and improved cancer treatment. This historic role has been reserved, with a $125 million increase in basic health research funding, even at a time of budget constraints.

In 1981, Secretary Schweiker began the long overdue process of reducing the costly burden of overregulation. Regulations proposed by the previous administration were reduced by 64 percent; the new block grants consolidated 27 categorical programs into seven block grants to the states, to administer according to their individual needs. This alone resulted in streamlining 318 pages of regulations down to six pages.

The federal health planning role, which had failed to achieve its desired results, was phased out, with a corresponding 75% decrease in planning agency paperwork. And in 1981 the ''Drug Lag'' narrowed . . . with the largest number of new medical drugs approved (27) since the 1962 drug law was passed.

At least two billion in taxpayer dollars was saved by a tough crackdown on waste, fraud and abuse . . . such as stopping payments to dead Social Security beneficiaries, tracking down medical school loan defaulters, increased audits and overpayment recoveries, and using computers for the first time to dig out illegal payments.

Public Health Service hospitals, which a long line of administrations had unsuccessfully tried to transfer, were shifted to other public uses and to the private sector.

Reforms in the system of making welfare payments, such as encouraging recipients to work, were passed into law, with a potential five-year saving of $11 billion.

Millions of taxpayer dollars were saved by bringing down the high cost of the HHS bureaucracy, including cuts in travel expenses by 20%, and a reduction in employment by 7%. The impact on employees was less, however, since only 23% of those leaving federal employment did so involuntarily . . . the rest were transferred with the PHS hospitals to the private sector or left voluntarily.

Where do we go from here? The foundation of all progress must be based on restoration of a healthy American economy — and that's what the President is trying to do against tough odds — ''Tip'' O'Neill and Company.

Part of that overall recovery program is the President's historic proposal to ''sort out'' the roles of federal and state governments in funding human services. The President has proposed a new system of federal-state cooperation to accomplish that end.

Meanwhile, we will continue to encourage a ''wellness-oriented'' health strategy, using government, the private sector and public education to make Americans healthier. The administration will follow through on last year's task force suggestions for bringing competition and consumer choice to the health marketplace . . . by working with Congress toward legislative reforms for lower prices.

Five task forces will carry the ball on continued regulatory reform: in Hospital Regulations, Medical Drug Approval, Medicaid, Entitlement Programs and State Non-Entitlement Programs.

The President's Bi-Partisan Commission, created to find ways of preserving and strengthening the Social Security System will seek answers during the year. HHS will intensify its campaign against waste, fraud and abuse.

As I said earlier, HHS programs have gotten a larger and larger share of the federal budget pie. In 1950, only 5% went to welfare and human needs. In FY 1983 that share will be a huge 36% — and still growing — yet Reagan is portrayed as a ''bad'' guy who takes from the poor — despite the fact that the HHS budget is $56 billion larger than the defense budget.

Growth of HHS spending has been astronomical. During the 1950s by 82%; in the 60s by 188%; and during the 70s by 313%.

The major cause of the steep growth is the entitlement programs. Over 95% of the entire HHS 1983 budget is allocated to programs of Social Security and the Health Care Financing Administration (Medicare and Medicaid). These are benefits which Americans are ''entitled'' to by law.

Obviously, because much of our budget is taken up by these programs, efforts to curb spending must include entitlement reform. The Administration has proposed modifications that would better target benefits while eliminating waste, fraud and inefficiency.

Even the Reagan program continues the growth, but

with an effort to ease the upward climb. When the Reagan Administration took office, the 1981 budget had a whopping 17.8% hike over the previous year. The 1982 Reagan budget eased that growth rate to 10.5%. The 1983 budget looks to a further moderation of 8% growth . . . an increase totaling $20.3 billion in outlays. This 8% increase in the HHS budget is almost double the 4.5% overall increase in the total federal budget.

How do we level off these sky rocketing costs?

Between 1971 and 1981 employment at HEW rose steadily — from 102,900 to a peak of 155,400 employees when this administration took office in January 1981. Last year, the payroll was reduced by 10,860 people, or about 7%. Only 23% left federal service involuntarily. Many of those who left were simply transferred to the private sector with the public health service hospitals.

Last year $35 billion was cut from the previous administration's budget for social programs. But again, this reduction was only a cut in the rate of growth, and amounted to less than 7% of total spending nationally.

Controlling inflation is a major weapon in reducing HHS spending. The impact on three programs alone (Medicare, Old Age Survivors and Disability Insurance, and Supplemental Security Income) means we must spend about $2 billion just to stay even.

That's why we are so encouraged by the dramatic results that has been achieved against inflation. As you know, in March the inflation rate fell to minus 0.3%, from plus 3.5% in February — the largest one month drop since November 1953, and the first time since 1965 that the inflation rate has gone below zero.

By bringing inflation down, as this administration has done, we are making our human services dollars go farther. Had the inflation rate remained at 10%, this year it would have cost $20.5 billion just to stay even in human services.

Leveling out hospital costs is crucial. While consumer prices rose two and one half times between 1965 and 1981, hospital costs rose twice that much — five and one half times. As I said earlier, last year alone, since the federal government pays 40% of America's hospital bills, we have an important stake in solving this problem. We believe structural improvements can be made that will improve the system's efficiency and reduce costs, without adverse effect on the health of Americans.

You physicians would be interested to know that you charged your patients more during that time frame, but your fees did not go up nearly as much as hospital fees.

Medicare and Medicaid have played a crucial role in health care inflation. Between 1975 and 1980, the average yearly growth of these programs was 15.8%, with a seven-fold *increase* projected between 1970 and 1985. The fact is we simply won't be able to support these programs at current rates of growth.

More than 90% of all health bills are paid by third-party payors — insurance that "hides" the true cost of health care from patients, physicians and hospitals.

In 1950 the average cost of a day in a hospital was $15. In 1980 it was $245. Put in constant 1967 dollars, that 1950 hospital day cost $22, of which 30% was paid by the patient out-of-pocket. The 1980 hospital day cost $99, of which only 9% came out of the patient's pocket.

In other words, despite a staggering increase from $15 to $245 a day during the past three decades, the out-of-pocket *cost to the patient* (in 1967 dollars) hardly went up at all — edging up from seven dollars a day to only nine dollars a day. It's no small wonder, then, that actual hospital costs are of little direct concern to patients, whose insurance picks up the tab regardless.

With the federal taxpayer picking up 40% of the health care tab in America, it's obvious that everyone has a stake in reforms that will keep costs down. I solicit your help and advice in this process that we must get on with.

Thank you for your courtesy in listening to a lawyer talk about these issues. ⊡

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INDICATIONS AND USAGE: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in the long-term management of these diseases. Safety and effectiveness have not been established for Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain. Treatment of primary dysmenorrhea.

CONTRAINDICATIONS: Patients hypersensitive to ibuprofen, or with the syndrome of nasal polyps, angio-edema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory drugs (see WARNINGS).

WARNINGS: Anaphylactoid reactions have occurred in patients hypersensitive to aspirin (see CONTRAINDICATIONS). Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration, perforation, or gastrointestinal bleeding can end fatally, however, an association has not been established. Rufen should be given under close supervision to patients with a history of upper gastrointestinal tract disease, and only after consulting the ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be attempted. If Rufen must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

PRECAUTIONS: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If developed, discontinue Rufen and administer an ophthalmologic examination.

Fluid retention and edema have been associated with Rufen; caution should be used in patients with a history of cardiac decompensation.

Rufen can inhibit platelet aggregation and prolong bleeding time. Use with caution in patients with intrinsic coagulation defects and those taking anticoagulants.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy, this therapy should be tapered slowly when adding Rufen.

DRUG INTERACTION: *Coumarin-type anticoagulants.* The physician should be cautious when administering Rufen to patients on anticoagulants.

Aspirin. Concomitant use may decrease Rufen blood levels.

PREGNANCY AND NURSING MOTHERS: Rufen should not be taken during pregnancy nor by nursing mothers.

ADVERSE REACTIONS: Incidence greater than 1%. Gastrointestinal: The most frequent adverse reaction is gastrointestinal (4 to 16%). Includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of GI tract (bloating and flatulence). Central Nervous System: dizziness*, headache, nervousness. Dermatologic: rash* (including maculopapular type), pruritus. Special Senses: tinnitus. Metabolic: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS). *Incidence 3% to 9%.

Incidence less than 1 in 100. Gastrointestinal: gastric or duodenal ulcer with bleeding and/or perforation, hemorrhage, melena. Central Nervous System: depression, insomnia, confusion, emotional lability, somnolence, aseptic meningitis with fever and coma. Dermatologic: vesiculobullous eruptions, urticaria, erythema multiforme, Stevens-Johnson syndrome and alopecia. *Special Senses:* hearing loss, amblyopia (blurred and/or diminished vision, scotomata and/or changes in color vision) [see PRECAUTIONS]. Hematologic: neutropenia, agranulocytosis, aplastic anemia, hemolytic anemia (sometimes Coombs' positive), thrombocytopenia with or without purpura eosinophilia, decreases in hemoglobin and hematocrit. Cardiovascular: congestive heart failure in patients with marginal cardiac function, elevated blood pressure. Allergic: syndrome of abdominal pain, fever, chills, nausea and vomiting, anaphylaxis, bronchospasms (see CONTRAINDICATIONS). Renal: acute renal failure in patients with preexisting significantly impaired renal function, decreased creatinine clearance, polyuria, azotemia, cystitis, hematuria. Miscellaneous: dry eyes and mouth, gingival ulcers, rhinitis.

Causal relationship unknown. Gastrointestinal: pancreatitis. Central Nervous System: paresthesias, hallucinations, dream abnormalities, pseudotumor cerebri. Dermatologic: toxic epidermal necrolysis, photoallergic skin reactions. Special Senses: conjunctivitis, diplopia, optic neuritis. Hematologic: bleeding episodes. Allergic: serum sickness, lupus erythematosus syndrome, Henoch-Schonlein vasculitis. Endocrine: gynecomastia, hypoglycemia. Cardiovascular: arrhythmias (sinus tachycardia, bradycardia, and palpitations). Renal: renal papillary necrosis.

OVERDOSAGE: Acute overdosage, the stomach should be emptied. Rufen is acidic and excreted in the urine, alkaline diuresis may benefit.

DOSAGE AND ADMINISTRATION: Rheumatoid arthritis and osteoarthritis, including flareups of chronic disease: Suggested dosage 400 mg t.i.d. or q.i.d.

Dysmenorrhea: 400 mg every 4 hours as necessary.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for the relief of pain. *Do not exceed 2,400 mg per day.*

CAUTION: Federal law prohibits dispensing without prescription.

Blood Conservation in Cardiac Surgery

James V. Richardson, M.D.
Richard J. Cyrus, M.D.

A new intra-operative blood salvage system was instituted in an existing cardiac surgery program at St. Margaret's Hospital in Montgomery in 1981. This system (Cell-saver®, Haemonetics), allows blood normally discarded during an operation to be removed from the operative field. Through filtration, washing and re-suspension in a saline solution, a high-quality, autologous blood product is manufactured, which can be transfused to the patient within a few minutes. We compared 25 consecutive patients (Group I) having coronary artery bypass grafting in our hospital during which this system was used with 25 consecutive patients (Group II) having the same operation prior to the institution of this system. In Group I, 67 units (m̄ 2.6 per patient) of banked blood and 61 Cell-saver® units (m̄ 2.4 per patient) were used. In Group II, 112 units (m̄ 4.5 units per patient) of banked blood were used. The substantial savings of blood illustrated by this study and the low cost of the system to the patient justifies the continued routine use of this system in cardiac surgery.

Introduction

Over the past several years, a number of blood conservation techniques have been developed for cardiac surgery. These include hemodilution, preoperative removal and storage of autologous blood,[1-5] recent intra-operative blood salvage systems[6] and salvage of mediastinal shed blood.[7] The intraoperative blood salvage systems are now popular and highly satisfactory methods of salvaging blood during elective and emergency surgery. We recently initiated a Cell-saver® system in our cardiac surgery program and this study was done to determine the impact of the system on the volume of blood now necessary for the performance of these operations.

From St. Margaret's Hospital, Montgomery, Alabama.

Method and Materials

We randomly selected 25 consecutive patients who underwent coronary artery bypass grafting during which the Cell-saver® was used (Group I). The blood requirements for these operations were compared to those required for 25 consecutive patients (Group II) who underwent coronary artery bypass grafting prior to the initiation of this system. The Cell-saver® was used in Group I from the skin incision to the end of the operation. The contents of the oxygenator and arterial line were also run through the system after the operation was completed. No other blood conservation techniques were used. Banked blood requirements were determined by calculating the total number of whole blood and packed cell units utilized during and in the first 48 hours following surgery. A Cell-saver® unit was designated as 250cc of saline-suspended (hematocrit 60%-70%) cells. A reasonable degree (hematocrit 25%-30%) of normovolemic anemia was generally accepted in both groups of patients.

Results

In Group I, 67 units of banked blood were used (m̄ 2.6 per patient) and 61 Cell-saver® units (m̄ 2.4 per patient) were salvaged. In 15 patients (60%), ≤ 2 units of banked blood were used. In Group II, 112 units of banked blood were used (m̄ 4.5 per patient). There were no complications related to the use of salvaged blood. There were no serious transfusion reactions related to banked blood in either group.

Discussion

Cardiac surgical programs have been large utilizers of banked blood in this country. Recent developments in blood salvage techniques have reduced the amount of

banked blood necessary for the successful performance of these procedures.[1-7] Pre-operative phlebotomy with subsequent retransfusion was one of the earlier techniques and is still in use in some centers.[1-3] Autotransfusion devices were developed many years ago, but generally require total patient heparinization for successful use. Recent blood salvage systems (Cell-saver®, IBM®) that require only regional heparinization (of the machine itself) are applicable in most surgical instances and provide a better quality product for transfusion. These systems provide for the removal of all blood and fluid from the operative field.[6] Through a system of filtration, washing and re-suspension of the red cells in a saline solution, the majority of shed blood may be retransfused to the patient. The Cell-saver® system combines simplicity of use, provides an excellent quality of blood and has remarkably reduced the amount of blood necessary for cardiac surgery in several centers.

Our study compares the amount of banked blood required in patients in whom the Cell-saver® was used to another group of patients having the same operation prior to the institution of the system in our hospital. The amount of banked blood required for the group in which the Cell-saver® was used was markedly less than that required in the group in which the Cell-saver® was not used. Some 61 Cell-saver® units (m̄ 2.4 per patient) were salvaged in Group I using the system. There were no complications during or since the study related to the use of this system.

The use of this system results in significant reduction of banked blood usage and therefore reduces laboratory cost, risk of hepatitis and major transfusion reactions and provides more blood for use in other surgical procedures when the Cell-saver® cannot be used. The estimated savings of banked blood by the use of this system in our hospital is 600 units per year.

We believe that this study illustrates the effectiveness and safety of this system. We recommend that it be used routinely in cardiac surgery. We also recommend its use during certain emergency and elective thoracic, vascular, orthopedic and neurosurgical procedures.

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Rape Mythology

John W. Davis, Jr., M.D.*

We often hear:

"She just wanted to be raped, otherwise she wouldn't have been in *that place, with that kind of man, by herself.* Why else would she be dressed in such a skimpy outfit? Besides, she would have put up a fight. They say she didn't have a scratch on her."

A statement like this reflects numerous popular opinions about rape, opinions which sound reasonable. These and other opinions reflect the common mythology which surrounds rape.[1] Below are listed a number of generally accepted ideas about rape.

- The victim is almost always partly to blame for the rape.
- Nice girls rarely get raped.[2]
- She probably enjoyed getting raped anyway, so what is the big deal.[3]
- Only sexually provocative women are raped.
- Men rape because they are sexually frustrated or oversexed.[4]
- If she didn't want to have sex, she could have stopped him one way or another.
- Pornography encourages rape.[4]
- Rape is sexually pleasurable (for the rapist and possibly the victim).
- It is not good to talk with a rape victim about the rape because this will only upset her and make matters worse.
- Rape is not a common crime.[3]

Each popular idea does contain an element of truth, at least in some rape cases. Rape studies have shown that popular concepts are based on distorted assumptions about rape. A number of distorted assumptions about rape are discussed in the rest of this article.

It is often concluded that a rape victim acted in such an enticing and seductive fashion that she provoked rape by overstimulating some helpless male. She may have been in a secluded spot alone because she desired sexual relations. After the act she felt guilty, angry, was afraid of her husband's possible reaction, or for some other reason accused this normal adult male of raping her.

Such thinking is based on the idea that rape is sexually motivated, when in fact rape is an act of violence performed in a sexual fashion.[4] The goal of rape behavior is the aggressive domination of another person. Pent-up feelings of range are released and a sense of power, control and strength frequently occurs.

The total domination and humiliation of another person serves to neutralize the rapist's own feelings of personal inadequacy and weakness. The goal of rape is thus *not* sexual gratification.[4] Many rapists will say (off the record, after the trial, etc.) that they experienced a tremendous sense of emotional release during the rape, but slight or no sexual satisfaction.[4] The emotional release came from the expression of pent-up feelings of rage and frustration not from pent-up sexual feelings.[4]

Many rapists have previous criminal convictions for crimes of impulsive violence such as Assault and Battery, Wife Beating, Child Abuse, Disturbing the Peace, etc.[4] Rapists often say that they would have raped any woman who was available when they felt the urge to rape. Availability, vulnerability, race, age, resemblance to a frustrating woman all are important factors in determining who the victim is.

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Pretty seductive (''loose''?) young women are not most likely to be raped. Any woman could be chosen if she is vulnerable, accessible or fulfills other criteria important to a particular rapist. Psychological studies indicate that seductive dress, sexual attractiveness, etc. are not usually determining factors.[4] However, rapists will often minimize their responsibility for a criminal rape by implying that they were seduced to the point that they ''lost control'' and were overwhelmed by sexual desire.[2]

The blame is shifted to the victim. The rapist may avoid arrest, conviction or other consequences of his behavior if he is successful in getting others to blame the victim. Such a pattern of false logic suggests that it would be permissible for a poor person to steal displayed jewelry from a store where it was attractively displayed. Liquor stores could be blamed if they were robbed by alcoholics.

There is no evidence to support the idea that rapists are sexually frustrated or over-sexed. Most rapists have an ongoing consecutive sexual relationship at the time they commit rape.[4] The rapists may convince many people that he is not to blame, or only partly to blame. He appeals to the assumption that rape is primarily a sexual behavior. Once this assumption is accepted, logically it follows that the victim probably played a role and may have actually enjoyed this type of sexual act. If rape is viewed as a hostile, sadistic, humiliating assault, the entire perspective changes. After all, who ''enjoys'' or would provoke a hostile, humiliating assault — except a masochist?

Rape is a common violent crime but is infrequently reported. Probably 90% of all rapes are not reported.[4] Most convicted rapists began rape about age 14 to 16 and had committed five to ten rapes before being convicted of rape.[4] Ten percent of convicted rapists had raped fifty or more times. The crime of rape is a common crime that is rarely reported and more rarely results in a criminal conviction.[4]

Many people believe that pornography contributes to rape and molestation. In general there is no clear scientific evidence of a relationship between these behaviors and exposure to pornography. Considerable scientific study and debate continue.

Perhaps certain types of pornography, such as violent, sadistic pornography, may contribute to sexual criminal behavior.[4] Perhaps erotic-romantic pornography exposure decreases the liklihood of rape and molestation.[4]

It is popularly thought that rape victims could have fought off their rapists, if they really wanted to. Studies do show that *certain* behaviors will stop *certain* rapists in *certain* situations. However, the same attitudes or behaviors would provoke dangerous, perhaps lethal responses in other rapists.[4] It is important to remember that the victim is usually off guard, frightened and has little chance to plan a strategy to ward off her attacker. Two recent cases that I have encountered involved potentially very dangerous circumstances. One woman got into her car and found a large knife at her throat. Another woman was told by two large armed men they were going to hurt her badly if she did not cooperate. What plan of resistance would have worked in these cases?

The ''forget about it and get your mind on something else approach'' does not work for rape victims. What the victim needs most is someone who is supportive emotionally and allows her to express her thoughts and feelings openly. This person should be non-judgemental during the ventilation and reliving of the rape. (Associated thoughts, feelings, memories and fantasies also need expression. Frequently the reactions of family members, friends, lovers, and spouses also require discussion.)

The victim may be having difficulty deciding whether or not to report the rape and take legal action. Appropriate examinations, collection of evidence in a proper fashion and prevention of venereal disease or rape pregnancy are performed where indicated.

Supportive psychotherapy or counseling is usually required for several weeks to six months or longer. The rape reaction is a gross stress reaction similar to those caused by deaths of loved ones, severe injuries, war experiences and disasters. If the reaction is not thoroughly dealt with, a delayed long term effect is usually evidenced by depression, personality change, alcohol or drug abuse, destructive behavior, sexual problems or psychosomatic illness. Unfortunately those associated with the victim may believe the previously stated misconceptions and attack or blame the victim unknowingly instead of supporting her.

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Zollinger-Ellison Syndrome

A. B. Reddy, M.D.*

Zollinger-Ellison Syndrome (ZE Syndrome) is characterized by intractable peptic ulcer disease with or without diarrhea.[1] The excessive production of gastrin by non-beta islet cell tumors (gastrinomas) is responsible for symptoms in this disease.[1] The disease is not uncommon and the diagnosis of this condition is made easier by the availability of radioimmunoassay of gastrin.[2] The treatment of ZE Syndrome has radically changed in recent years. The purpose of this study is to assess the evolution of diagnostic and therapeutic modalities of ZE Syndrome over the years.

Materials, Methods and Results

The presenting symptoms, mode of diagnosis and treatment of patients with ZE Syndrome treated at University of Louisville's hospitals between 1970 and 1980, were reviewed. There were 7 cases of ZE Syndrome during that period.

The presenting symptoms — six of seven patients had abdominal pain at the time of presentation. The one patient without abdominal pain at the time of diagnosis presented with only nausea, vomiting and diarrhea. Two patients presented with perforated peptic ulcer. Three patients had diarrhea at the time of diagnosis.

Fasting gastrin levels — The highest value was 8,910 and the lowest value was 286.

Mode of diagnosis — The diagnosis was made by secretin provocation test in 4 patients. In one patient multiple islet cell adenomas of pancreas were found at autopsy. In other patients the diagnosis was made by acid secretion studies.

Serum Calcium level — Two patients had serum calcium greater than 11 mg. % and both patients had parathyroid adenomas which were resected.

Treatment — All but one patient were treated surgically and that patient died within three weeks after diagnosis. No autopsy was obtained. Only one patient is being treated with cimetidine. Six patients had total gastrectomy of whom four patients had good results.

Discussion

ZE Syndrome is slightly more common in males and the mean age is 47 years.[3] 90-95 per cent of patients with ZE Syndrome develop peptic ulcers sometime during the course of their disease.[4] About 6% of patients present only with diarrhea without abdominal pain or peptic ulcer.[1]

The ZE Syndrome should be suspected in the following clinical situations:[1]

1. Ulcers in the 2nd, or 3rd portion of the duodenum or jejunum (in garden variety of duodenal ulcers, the ulcers are located in the duodenal bulb).
2. Multiple upper gastrointestinal ulcers.
3. Giant peptic ulcers.
4. Failure of the ulcers to respond to customary treatment.
5. Prominent gastric rugal folds seen by endoscopy or upper gastrointestinal series.
6. Large amounts of fluid in the stomach in the absence of demonstrable obstruction.
7. Peptic ulcer disease associated with diarrhea.

Diagnosis

The diagnosis is confirmed by one of the following tests:

1. Fasting gastrin level.

* Gastroenterologist, Druid City Hospital, Tuscaloosa, Alabama. Clinical Assistant Professor, University of Alabama.

Candidates for nutritional therapy...

10,000,000 alcoholics. Ethanol may produce many effects that together bring about nutritional deficiencies, so that alcoholism affects nutrition at many levels.[1]

25,500,000 geriatric patients. The older patient may have some disorder or socio-economic problem that can undermine good nutrition.[2]

23,500,000 surgical patients. Nutritional status can be compromised by the trauma of surgery; and some operations interfere with the ingestion, digestion and absorption of food.[3]



Before prescribing, please consult complete product information, a summary of which follows:
Each Berocca® Plus tablet contains 5000 IU vitamin A (as vitamin A acetate), 30 IU vitamin E (as *dl*-alpha tocopheryl acetate), 500 mg vitamin C (ascorbic acid), 20 mg vitamin B_1 (as thiamine mononitrate), 20 mg vitamin B_2 (riboflavin), 100 mg niacin (as niacinamide), 25 mg vitamin B_6 (as pyridoxine HCl), 0.15 mg biotin, 25 mg pantothenic acid (as calcium pantothenate), 0.8 mg folic acid, 50 mcg vitamin B_{12} (cyanocobalamin), 27 mg iron (as ferrous fumarate), 0.1 mg chromium (as chromium nitrate), 50 mg magnesium (as magnesium oxide), 5 mg manganese (as manganese dioxide), 3 mg copper (as cupric oxide), 22.5 mg zinc (as zinc oxide).

Indications: Prophylactic or therapeutic nutritional supplementation in physiologically stressful conditions, including conditions causing depletion, or reduced absorption or bioavailability of essential vitamins and minerals; certain conditions resulting from severe B-vitamin or ascorbic acid deficiency; or conditions resulting in increased needs for essential vitamins and minerals.
Contraindications: Hypersensitivity to any component.
Warnings: Not for pernicious anemia or other megaloblastic anemias where vitamin B_{12} is deficient. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with vitamin B_{12} deficiency who receive supplemental folic acid and who are inadequately treated with B_{12}.
Precautions: *General:* Certain conditions may require additional nutritional supplementation. During pregnancy, supplementation with vitamin D and calcium may be required. Not intended for treatment of severe specific deficiencies. *Information for the Patient:* Toxic reactions have been reported with injudicious use of certain vitamins and minerals. Urge patients to follow specific dosage instructions. Keep out of reach of children. *Drug and Treatment Interactions:* As little as 5 mg pyridoxine daily can decrease the efficacy of levodopa in the treatment of parkinsonism. Not recommended for patients undergoing such therapy.
Adverse Reactions: Adverse reactions have been reported with specific vitamins and

ROCHE

5,000,000 hospital patients with infections.[4] Many are anorectic and may have a markedly reduced food intake. Supplements are often provided as a prudent measure because the vitamin status of critically ill patients cannot be readily determined.[3]

The incalculable millions on calorie-reduced diets. Patients ingesting 1000 or fewer calories per day could be at high risk because this intake may not supply most nutrients in adequate amounts without supplementation.[5]



minerals, but generally at levels substantially higher than those in Berocca Plus. However, allergic and idiosyncratic reactions are possible at lower levels. Iron, even at the usual recommended levels, has been associated with gastrointestinal intolerance in some patients.

Dosage and Administration: Usual adult dosage: one tablet daily. Not recommended for children. Available on prescription only.

How Supplied: Golden yellow, capsule-shaped tablets—bottles of 100.

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Nutley, New Jersey 07110

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Berocca Plus Tablets provide: therapeutic levels of ascorbic acid and B-complex vitamins; supplemental levels of biotin, vitamins A and E, and five important minerals (iron, chromium, manganese, copper and zinc); plus magnesium. Berocca Plus is not intended for the treatment of specific vitamin and/or mineral deficiencies.

Berocca Plus, highly acceptable to patients, has virtually no odor or aftertaste and is economical. And its "Rx only" status means more physician involvement, better patient compliance.

References: 1. Shaw S, Lieber CS: Nutrition and alcoholism, chap. 40, in *Modern Nutrition in Health and Disease*, edited by Goodhart RS, Shils ME. Philadelphia, Lea & Febiger, 1980, pp. 1220, 1237. 2. Watkin DM: Nutrition for the aging and the aged, chap. 28, in *Modern Nutrition in Health and Disease, op. cit.*, p. 781. 3. Shils ME, Randall HT: Diet and nutrition in the care of the surgical patient, chap. 36, in *Modern Nutrition in Health and Disease, op. cit.*, pp. 1084, 1089, 1114. 4. Dixon RE: *Ann Intern Med 89* (Part 2): 749-753, Nov 1978. 5. Committee on Dietary Allowances, National Research Council: Recommended Dietary Allowances, ed 9. Washington, National Academy of Sciences, 1980, p. 13.

candidates for

Rx ONLY **Berocca® Plus** TABLETS

THE MULTIVITAMIN/MINERAL FORMULATION

2. Basal acid output (BAO)/Maximal acid output (MAO) ratio.
3. Provocative tests.

Fasting Gastrin Level

Inappropriate hypergastremia — High serum gastrin in patients with high gastric acidity is inappropriate and if found is diagnostic of ZE Syndrome.[5] In patients with appropriate symptomatology fasting gastrin level greater than 1000 pg/ml is diagnostic of ZE Syndrome.[1]

High gastrin levels are also found in:
Pernicious anemia
Achlorhydria without pernicious anemia
Gastric ulcer
Postprandial state
Anteral G cell hyperplasia
Isolated retained antrum after gastrectomy
Postvagotomy states
Renal failure
Small intestinal resection
Rheumatoid arthritis
Pheochromocytoma
Gastric cancer

TABLE 1
Protocol for the Secretin Provocative Test for Gastrinoma. Provocative agent used — GI H Secretin. The drug can be obtained from — KABA Group Inc. Lafayette Place, Greenwich, Conn. 06830.

Procedure:

1. **Twenty-one Gauge Butterfly needle (Heparin lock) is inserted into one of the large veins of the forearm for the purpose of drawing blood samples.**
2. **Then blood is drawn for basal (fasting) gastrin level.**
3. **Then 10 ml of 0.9% Normal Saline is added to 2 units per Kg body weight of GI H Secretin, and is injected as intravenous bolus injection over 30 seconds into a separate vein.**
4. **Serial blood samples are obtained, from the butterfly needle, for gastrin level at 5 minute intervals for 30 minutes, after injecting GI H Secretin.**
5. **Interpretation of results — An increase in Serum gastrin at least 200 pg/ml. over baseline, supports the diagnosis of gastrinoma.**

Reference: McGuigan, J.E. and Wolfe, M. M.: Secretin injection test in the diagnosis of gastrinoma. Gastroenterology 79:1324-1331, 1980.

BAO/MAO Ratio

Gastrinoma can be differentiated from other causes of hypergastrinemia by doing gastric analysis. The ratio of Basal acid output (BAO) to Maximal acid output (MAO) >0.6 in a patient with high basal acid output is strongly suggestive of ZE Syndrome.[1] Although high fasting gastrin, and elevation of BAO/MAO ratio to >0.6 is suggestive of ZE Syndrome there is considerable overlap between ordinary peptic ulcer and ZE Syndrome.[4] Therefore, provocative tests are often required to establish or exclude the diagnosis of ZE Syndrome.[4]

Provocative Tests

a. Calcium provocation tests
 Method — Calcium gluconate 4 mg/Kg is given by continuous I.V. drip for three hours and gastrin level is obtained before starting the drip and every ½ hour for three hours. In patients with gastrinoma the elevation of gastrin level is substantial (greater than 395 Pg/ml or more) especially during final hour of Calcium infusion.[7] However, some studies indicate false positive and false negative responses in patients with ZE Syndrome.[4] Moreover, the Calcium provocation test is lengthy and may be associated with adverse side effects.[4]
b. Secretin provocation test
 Method — See Table 1[4]
 This test is safe, simple and if positive is diagnostic of ZE Syndrome.[4] It is reliable even in patients with previous vagotomy.[7]

Treatment

Before the availability of cimetidine total gastrectomy was the treatment of choice. Now, the approach to ZE Syndrome is different, and is still in evolution and reevaluation. After the diagnosis of ZE Syndrome is established the patients should have upper Gastrointestinal endoscopy to rule out duodenal tumors. Computerized tomography of the abdomen (CT Scan) should be done to exclude pancreatic or duodenal tumors. Resection of the gastrinoma should be attempted if a solitary is found either in the tail or body of pancreas[3] or in the duodenum.[8]

Malignant potential — Because these tumors are slowly growing but biologically malignant, surgical removal should be strongly considered.[4] The effectiveness of other modalities in treating malignant gastrinoma is inconclusive.[4]

Medical Treatment

If the tumor can not be resected, cimetidine is useful in inducing ulcer healing, controlling diarrhea, and secretory inhibition.[9] McCarthy and Associates demonstrated that Cimetidine can be a viable option in patients with ZE Syndrome even on long term basis.[10] Cimetidine has no effect on the tumor and gastrin level is unaffected by Cimetidine therapy.[9] When anticholinergics are added to Cimetidine, suppression of acid production is more pronounced and the dose of Cimetidine can be reduced.[11] Cimetidine suppresses acid production more effectively after vagotomy[12] and so Richardson and associates recommend vagotomy and Cimetidine treatment routinely to all patients with ZE Syndrome.[12]

If the symptoms can not be controlled with medical treatment and vagotomy, total gastrectomy has to be considered which usually gives good symptomatic improvement.[3]

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ONE FOR ALL – One tablet treats pinworm in any patient, regardless of age or body weight.* Obviates need to calculate individual dosages.

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*Contraindicated in pregnant women and in persons who have shown hypersensitivity to the drug.

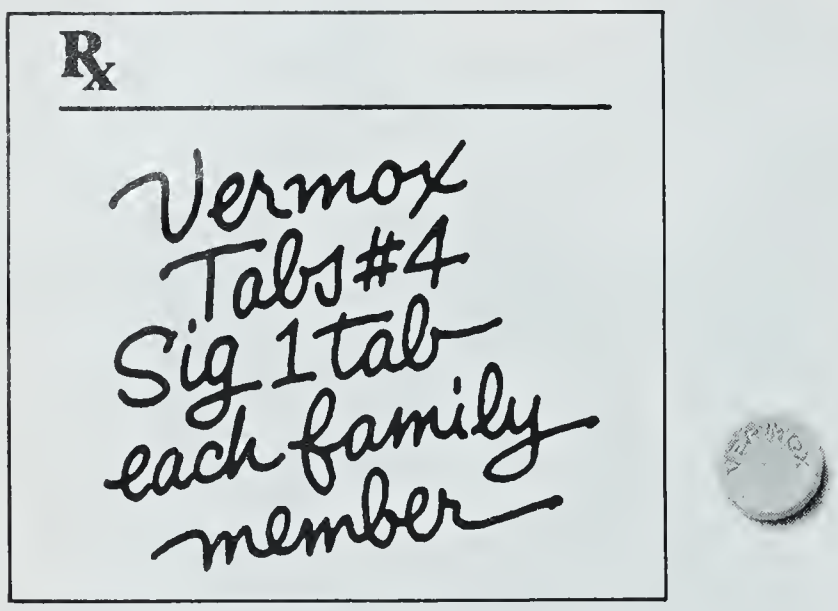
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Please see complete Prescribing Information on adjacent page.

VERMOX® CHEWABLE TABLETS (mebendazole)



DESCRIPTION VERMOX (mebendazole) is methyl 5-benzoylbenzimidazole-2-carbamate.

ACTIONS VERMOX exerts its anthelmintic effect by blocking glucose uptake by the susceptible helminths, thereby depleting the energy level until it becomes inadequate for survival. In man, approximately 2% of administered mebendazole is excreted in urine as unchanged drug or a primary metabolite. Following administration of 100 mg of mebendazole twice daily for three consecutive days, plasma levels of mebendazole and its primary metabolite, the 2-amine, never exceeded 0.03 μg/ml and 0.09 μg/ml, respectively.

INDICATIONS VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (common roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies as a function of such factors as pre-existing diarrhea and gastrointestinal transit time, degree of infection and helminth strains. Efficacy rates derived from various studies are shown in the table below:

	Whipworm	Common Roundworm	Hookworm	Pinworm
cure rates				
mean	68%	98%	96%	95%
(range)	(61-75%)	(91-100%)	—	(90-100%)
egg reduction				
mean	93%	99.7%	99.9%	—
(range)	(70-99%)	(99.5%-100%)	—	—

CONTRAINDICATIONS VERMOX is contraindicated in pregnant women (see Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

PRECAUTIONS *PREGNANCY:* VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

PEDIATRIC USE: The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

ADVERSE REACTIONS Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

DOSAGE AND ADMINISTRATION The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food. For the control of pinworm (enterobiasis), a single tablet is administered orally, one time. For the control of common roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days. If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

HOW SUPPLIED VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets.
VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium.

US Patent 3,657,267
December 1979

Committed to research...
because so much remains to be done.

Tableted by Janssen Pharmaceutica, Beerse, Belgium for

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Association with Parathyroid Adenomas

ZE Syndrome can be associated with parathyroic adenomas as part of MEA-1 Syndrome[10] and if serum calcium level is high parathormone level should be obtained.

Summary

In an appropriate clinical setting, fasting gastrin level can be used as a screening test to rule out ZE Syndrome. If the gastrin level is greater than 1000 it is diagnostic of ZE Syndrome. If the gastrin level elevation is borderline, secretin test should be done to confirm or exclude ZE Syndrome. Once the diagnosis is confirmed abdominal CT Scan and upper GI endoscopy should be done to identify gastrinoma. If a solitary gastrinoma is found attempt should be made to remove the tumor surgically. Otherwise Cimetidine with anticholinergics should be used to control the symptoms. It is controversial whether to do vagotomy routinely on all patients with ZE Syndrome, but if the symptoms are not controlled with medical treatment, vagotomy has to be considered. If there is no response to the above measures total gastrectomy should be done as a last resort.

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The New Hepatitis Vaccine

W. Roger Carlisle, M.D.*

The purpose of this article is to alert all physicians to the risk of Hepatitis B and to inform everyone of the availability of a new vaccine to prevent Hepatitis B.

From twenty to twenty-eight per cent of Pediatricians, Surgeons and Pathologists have been found to be carriers of HBsAg when tested. There is a large pool of HBsAg carriers in the United States which is growing annually. Five per cent of Hepatitis B cases will develop chronic active hepatitis. Since most acute Hepatitis B is subclinical, screening and prophylaxis with the new vaccine is both timely and necessary.

There is a great deal of new information in the prevention of hepatitis. We still recommend the hyperimmune globulin (HBIG) be given to patients who experience a needle stick from a positive carrier; to the spouse of a carrier; to a newborn baby whose mother is Hepatitis B positive and to someone who has received an inoculum of Hepatitis B positive blood. Patients who are exposed should receive a 5 ml. injection of HBIG which should be repeated in one month. HBIG should be given within 48 hours of exposure (or within maximum of seven days).

The hepatitis vaccine (Hepatavax B) will soon be released for general use. The vaccine will be released in a single vial which will contain three doses. The original studies were done with a 40 mcg. dose which was given to homosexuals in New York. This vaccine is made from purified coat products of the virus. Further studies have been done by the CDC which show that a 20 mcg. dose will be adequate. Hepatavax will come in a three dose vial. A dose will be given at 0, 1 month and at six months. The time period for a booster is not yet determined (probably 7 years). However, a booster injection will probably be recommended at some future date. Studies have shown that only 4% of patients given this vaccine produce no antibody. Ninety-six per cent of patients showed a good antibody response, approximately one month after their six month injection. Of the 4% of patients who did not respond to the vaccine, a fourth injection did cause a response in one-third of these patients.

The indications for the Hepatitis B vaccine are very clear. The Hepatitis B vaccine should be given to Physicians, Pathologists, Lab Technicians, Surgeons, Oncologists, people working in dialysis units, third year medical students, oral surgeons, male homosexuals and Indo-Chinese refugees (see Table I).

All people who are candidates for the Hepatitis B vaccine should be screened with the Hepatitis B surface antibody. If the surface antibody is negative, then the

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vaccine should be given. There are no side-effects if the patient happens to be Hepatitis B antigen positive. Two groups of people have been found not to need repeated screening because of their high exposure rate; these are male homosexuals and people who work in dialysis units. There are some debates about whether the cost effectiveness of antibody screening is justified. If the risk of increased antibody in populations is greater than 15%, then screening should be done. It is necessary from a medical-legal standpoint to inform all patients that the vaccine is not 100% protective.

TABLE I
INDICATIONS FOR HEPATITIS B VACCINE

Pathologists	**Military Personnel**
Laboratory technicians	**Embalmers**
Surgeons, pediatricians	**Morticians**
Oncologists	**Blood bank workers**
Dialysis technicians	**Prisoners**
Third year med students	**Abusers of injectible drugs**
Oral surgeons and dentists	**Indo-Chinese refugees**
Male homosexuals	**Haitian refugees**
Nurses	**Female prostitutes**
Gynecologists, internists	
Family practitioners	

So far, two very large studies have shown no significant complications from the Hepatitis B vaccine. It has been found to be extremely safe. There has been no increased incidence of Guillain-Barré Syndrome. This vaccine is different in that newborns can be vaccinated. If the newborn's mother has a positive Hepatitis B surface antigen, then the newborn can receive Hepatitis B immunoglobulin and the vaccine at the same time. This is a very unusual circumstance, but has been done and been found to be effective. Newborns do have a good antibody response. There is data suggesting that dialysis patients are not good responders to this vaccine. There is also some reduction in the antibody response in older patients.

As with all vaccines, Epinephrine should be available should an anaphylactoid reaction occur. The vaccine is not recommended during pregnancy and to nursing mothers. The vaccine should not routinely be used in children less than three months of age but is probably indicated in newborns if the mother is a HBsAg carrier. The dosage for children up to ten years of age is 0.5 ml. at 0, 1 and 6 months. A higher dose of 2 ml. is suggested in immuno-compromised hosts. (Table II) Local injection, pain and fever are the only complications commonly reported.

TABLE II
RECOMMENDED DOSE OF HEPATAVAX B

	Initial	*1 Month*	*3 Months*
Children (3 months to 10 years)	**0.5 ml**	**0.5 ml**	**0.5 ml**
Adults	**1.0 ml**	**1.0 ml**	**1 ml**
Immuno-compromised and dialysis patients	**2.0 ml**	**2.0 ml**	**2.0 ml**

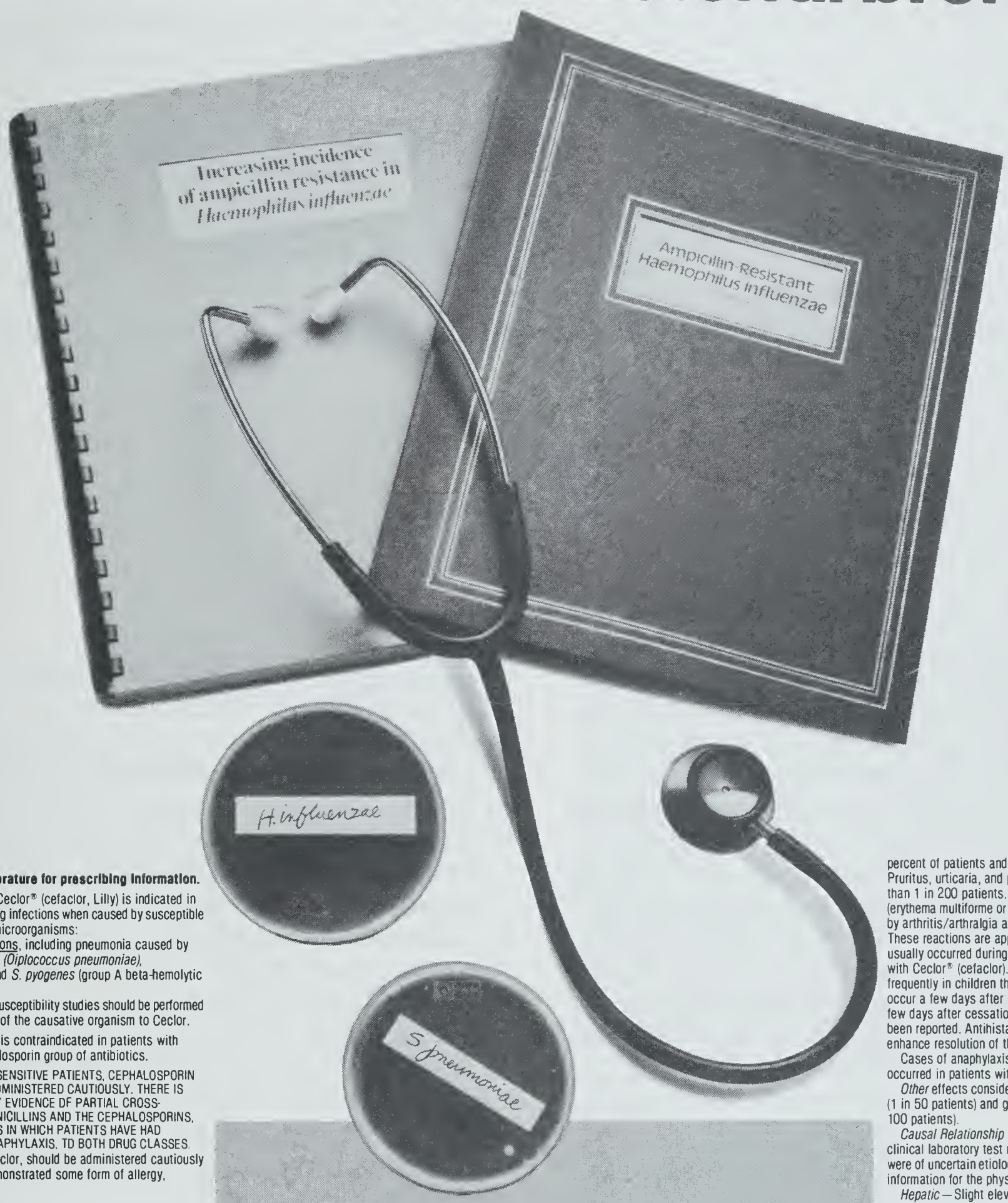
There is a new viral agent in the United States which is causing an increased incidence of hepatitis. This is the Delta agent. The Delta agent is a RNA virus which co-exists and requires the presence of Hepatitis B virus. The Delta agent is very common in Italy. Patients who are chronic carriers of Hepatitis B surface antigen are very susceptible to the Delta virus infection. Frequent relapses in patients who have had Hepatitis B surface antigenemia have been attributed to the Delta virus. The Delta virus may cause deterioration of patients with Hepatitis B infections. It may also present as a new acute hepatitis in known carriers of Hepatitis B. The Delta virus has been reported throughout the U.S., particularly in California.

In summary, we should see a major decrease in the incidence of Hepatitis B disease with the introduction of the Hepatitis B vaccine. The treatment of hepatitis is still primarily preventative in nature. All hepatitis patients should be followed for the development of chronic hepatitis which may lead to cirrhosis.

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An added complication...
in the treatment of bacterial bronchitis*



Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

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rief Summary.
onsult the package literature for prescribing information.

ndications and Usage: Ceclor® (cefaclor, Lilly) is indicated in e treatment of the following infections when caused by susceptible rains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *treptococcus pneumoniae (Diplococcus pneumoniae), aemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic treptococci)

Appropriate culture and susceptibility studies should be performed determine susceptibility of the causative organism to Ceclor.

ontraindication: Ceclor is contraindicated in patients with nown allergy to the cephalosporin group of antibiotics.

Varnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN NTIBIDTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS LINICAL AND LABORATORY EVIDENCE DF PARTIAL CROSS-LLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, ND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD EACTIONS, INCLUDING ANAPHYLAXIS, TD BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously any patient who has demonstrated some form of allergy, articularly to drugs.

recautions: If an allergic reaction to cefaclor occurs, the drug hould be discontinued, and, if necessary, the patient should be reated with appropriate agents, e.g., pressor amines, antihistamines, r corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of onsusceptible organisms. Careful observation of the patient is ssential. If superinfection occurs during therapy, appropriate neasures should be taken.

Positive direct Coombs tests have been reported during reatment with the cephalosporin antibiotics. In hematologic tudies or in transfusion cross-matching procedures when ntiglobulin tests are performed on the minor side or in Coomb esting of newborns whose mothers have received cephalosporin ntibiotics before parturition, it should be recognized that a ositive Coombs test may be due to the drug.

Ceclor should be administered with caution in the presence of narkedly impaired renal function. Under such a condition, careful linical observation and laboratory studies should be made ecause safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction or glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® ablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, JSP, Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established.

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below:

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.[8]

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

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Spinal Cord Injury Due to Diving Accident

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Ubol Ratanaubol, M.D.*
Chi-Tsou Huang, M.D.*

Spinal cord injury due to diving accident ranges between 2 to 8.4% of all traumatic spinal cord injuries yearly. This predominantly occurred between 15 to 20 years of age, mostly in males, particularly during the summer months and on the weekends. All occurred at the cervical cord levels. Among 46 patients, 21 had complete and 25 had incomplete quadriplegia with whom only 6 had useful motor functions. All complete injury patients had no neurologic recovery, however, only 1 incomplete injury patient who originally had only sensory sparing was able to ambulate for a short distance with supervision after rehabilitation.

Water sport is one of the popular sporting activities, and is one of the causes of accidents that lead to spinal cord injury.

During 1973 to 1981, 46 patients were admitted to Spain Rehabilitation Center with diagnosis of spinal cord injury due to diving accidents. The medical records of the patients were reviewed with reference to their clinical findings and their prognostic outcome.

Demographical Data

Table I showed yearly incidence. It represented in the range between 2 to 8.4% of all spinal cord injury patients throughout the study period. The highest age group was between 15 to 20 years and it had 23 cases. The highest month was in July and the highest day of the week was on Sunday. All bony injuries occurred in cervical areas predominantly at C_5 C_6 bony levels.

* Department of Rehabilitation Medicine, Spain Rehabilitation Center, University of Alabama in Birmingham, University Station, Birmingham, Alabama 35294.

Table II showed neurological level of injuries based on Frankel's which are as follow:

A. Complete spinal cord injury means that the lesion was found to be absent both motor and sensation below the level.
B. Sensory only: this implies that there was some sensation below the level of the lesion but complete motor paralysis below that level.
C. Motor useless implies that there was some motor power present below the lesion but it was of no practical use to the patient.
D. Motor useful: This implies that there was motor power below the level of the lesion that patient can use but strength is not normal.
E. Recovery: This implies that the patient was free of neurological symptoms; abnormal reflex may be present.

All cases were quadriplegic or quadriparesis. Twenty-one patients were complete quadriplegics; among 25 patients who became incomplete spinal cord injury, 6 patients had useful motor function, three patients had useless motor function and 16 patients showed only sensation sparing.

Location of Accident: Sixteen from swimming pool, pond; 10 from lake; 11 from river; others from mud puddle, pit from strip mine, beach; 4 only recorded shallow water.

Drugs or Alcohol: There was no record indicating that the patients were under the influence of alcohol or drugs.

Prognostic Outcome

Among 25 incomplete spinal cord injuries, 6 patients were motor functional and the other 3 patients had very

ttle change in their motor return. Sixteen patients who ad preserved some sensation, two patients had some notor return and only one patient was able to ambulate or a short distance by using ankle orthosis and walker. There was no neurological return in other injured subjects.

Table I
Yearly Incidence of Total SCI and Incidence of Diving Accident and Their Sex Distribution

Year	Traumatic SCI (n)	Diving Accident (n)	Male (n)	Female (n)
1981	119	6(5.04%)	6	-
1980	95	8(8.4%)	6	2
1979	88	3(3.4%)	3	-
1978	96	4(4.1%)	2	2
1977	110	9(8.1%)	8	1
1976	82	2(2.4%)	2	-
1975	104	8(7.6%)	8	-
1974	100	2(2%)	2	-
1973	75	4(5.3%)	3	1

Discussion

The exact number of SCI from diving accidents annot be determined accurately; in some cases they nay have diagnosis as drowning as cause of death when n fact the people were unable to help themselves due to xtensive paralysis. It is estimated that 7 to 10.5% of all raumatic spinal cord injury patients[2, 3, 4, 9] or 2.8 persons per million injuries were from diving accidents.[5] They occurred mostly in July, June and August and predominantly on Sunday, Saturday and Tuesday.[5, 6] Green et al report indicated that no difference in regards o the day of the week except that most of the injuries were in the afternoon and evening.[7] About 80-90% were males[6, 7, 8, 9] in the age group of 15 to 24.[6] A mall number of patients were reported below 10 and above 40[7] years. Bony change was predominantly in C5, 6. Mechanisms of injuries are varied from compression, hyperflexion or flexion rotation.[3, 5, 6] 98.5% were quadriplegics and 1.2% were paraplegics.[3] Accidents occurred in areas where the water is accessible to the public such as sea, river, lake and swimming pool. One report indicated that 37 patients among 72 patients received no formal swimming education; 46 patients had little or no familiarization with the pool in which they were injured; 55 patients were helped from the pool by persons with no training in rescue technique.[7] The emphasis of public and individual education is

Table II
The Level of Neurological Impairment

Neurological level	Complete spinal cord injury (n)	Incomplete spinal cord injury (n)		
		Motor		Sensation Only
		Function	Non Function	
C3	1	-	-	-
C4	9	-	-	1
C5	5	2	2	7
C6	5	4	1	6
C7	-	-	-	2
C8	1	-	-	-

extremely important. Obviously, these accidents occur during the most productive years of the person's life. Emotional problems involve both patients and family. Spinal cord injury from diving accidents is preventable. Our records showed no influence of drugs and alcohol at the time of accident and this was also observed by Green.[7] Their study showed that the majority of the injuries resulted from lack of good judgment rather than intoxication or pool structural deficiencies. Guttman[11] recommends giving swimming lessons at about the age of 5. A person can also prevent injury by learning to protect his head by stretching his arms up above his head and keeping hands locked when diving.[12] Also, he must know the area well before diving or swimming. Swimming and diving after dark or while under the influence of alcohol or drugs should be prohibited. Familiarization with lifesaving procedures, including first aid and transportation, are also very important. If it is done properly, it could save a person from further damage to the spinal cord.

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Bridging the Gap



Mrs. Robert Estock
President, A-MASA

Not so many years ago organized medicine neither sought after nor involved medical students and/or resident physicians in policies and decisions. Today, the scene is quite different.

There is now both a Medical Student Section and a Resident Physician Section in the structure of the American Medical Association, with more than 20,000 members in each section. Student and resident representatives sit in the House of Delegates of the AMA and on AMA Councils. Our own Medical Association of the State of Alabama has created a medical student section and a resident physician section and has welcomed them with open arms.

So it is with the Auxiliary, both on the national and state level. With the name Resident Physician/Medical Student Spouse Committee — RP/MSS — a plan is set into motion to include, encourage, support, involve, inform and reach out, and ''Bridge the Gap'' between the to-be physicians' spouses and the actively organized spouses of physicians as they serve their communities and medicine.

In Alabama, the Auxiliary to the Medical Association of the State of Alabama has long provided liaisons and support to the organized spouse groups of our two medical schools, University of Alabama and the University of South Alabama, and the two branches, Tuscaloosa and Huntsville. We give help in providing meeting places, programs, assist in their projects and for the past two years have sponsored both Medical student and Resident Physician spouses in membership at the local, state and national level.

The AMA Auxiliary publishes a newsletter, *Horizons,* especially for these spouses. It contains information geared to their special needs and interests. Members receive *Facets,* a magazine for and about physician spouses.

There are accredited teaching programs in Anniston, Birmingham, Fairfield, Gadsden, Huntsville, Mobile, Montgomery, Mount Vernon, Selma, Tuscaloosa, and Tuskegee. The spouses of these physicians in training are valuable assets to our communities and the benefit will be a mutual one — to our counties and to them personally.

The 1981-82 Resident Physician/Medical Student Spouse Committee of the AMA Auxiliary, with Mrs. George F. Scofield, Birmingham, serving as its chairman, developed a booklet, ''What Every Physician's Spouse Should Know . . . Survival Tips for Resident Physician/Medical Student Spouses.'' This contains a wealth of information and is available in single copies from the AMA Auxiliary, 535 North Dearborn Street, Chicago, Illinois, 60610. It addresses Marriage, Stress, Ethics, Impairment, the Practice, and introduces them to the Auxiliary.

Alabama's Sponsor a Spouse program is to be called Auxiliary Bridges the Gap, with the rainbow as a symbol. Each sponsor will pay the $5 membership dues for the RP/MS spouse and will introduce them to the auxiliary and its purposes. We know there truly is a pot of gold at each end as we come together and work for better health for our communities.

The four years of medical school pass quickly — there's so much to be learned, so much to understand. The stresses are great, and the pressures are unbelievable. Medical marriages are unique and we believe that the auxiliary offers much to each medical mate. We are united by a common cause: to improve the health and quality of life for all people.

We are a volunteer organization vitally involved in raising funds for medical education, affecting legislation pertaining to health care, and concerned with health services and education in local communities across this state and our nation. Auxiliary offers the opportunity to involvement in meaningful programs, and needs the special talents and abilities of all medical mates. Mrs. Henry Darnell, Birmingham, is our state liaison, and is ready to assist in this program this year.

Someone once said, ''The most difficult years of marriage are those following the ceremony.'' We believe that our lives should be more than survival — they should be filled with the pleasures that come from living to the fullest and from serving others, along the way. ⊡

Patty

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THE PHYSICIAN AND THE HOSPITAL: STRAINS IN THE ALLIANCE

Page 7

THE PATIENT THINKS HE HAS HEART TROUBLE...





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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation. The clearance of Valium and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.
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EXECUTIVE DIRECTOR



S. Lon Conner
Executive Director, MASA

Straining at Gnats, Swallowing Camels

When any politician, commentator or other pundit uses the inept phrase, ''the American health care industry,'' the public usually concludes, if it concludes anything at all, that this means doctors and hospitals.

It does, of course. But a huge segment of that ''health care industry'' generally escapes the righteous indignation of those who routinely deplore the rising costs of health care, reciting the customary litany of scary figures and even scarier projections.

Virtually unmentioned in most public discussions of health care costs are nursing homes, yet they have become giant corporations, often chains, absorbing millions of dollars that simply were not spent a generation ago. The chains have become so big some are saying that they cannot be adequately dealt with by state regulatory authority.

Consider just one of the investor-owned nursing home chains, Beverly Enterprises, with headquarters in Pasadena, California. Recent disclosures in Florida in the course of a CON application before the SHPDA there tell much of the story of nursing home growth in the past 20 years.

Beverly owns 500 nursing homes in 34 states. It plans to add 20 more nursing homes to the 34 it already has in Florida. But Beverly is far more than a nursing home chain. Through corporate ownership interest, stockholders, acquisitions and joint ventures, Beverly is affiliated with the nation's largest hospital chain, Hospital Corporation of America, which owns 18% of interest in Beverly, 9% from turning over nursing homes acquired by HCA from its takeover of Hospital Affiliates.

Large institutional investors in Beverly include: Connecticut General, with 420,000 shares; the trust departments of Chase Manhattan and Citicorp Banks, over 500,000 shares; Exxon pension fund, Provident Investment Counsel, 287,000 shares.

Beverly, in turn, owns 50% of the Retirement Corporation of America, and recently acquired the second largest nursing home chain in Florida, Mediplex, which operated 49 nursing homes nationwide and 12 in Florida. And Beverly recently formed a joint venture to provide home health care services with the Upjohn Company, the nation's largest provider of home health care.

Reportedly, almost two-thirds of Beverly's income derives from Medicaid and Medicare.

Now, none of this is meant to suggest that Beverly is anything but above-board in its aggressive business practices. But the size of the company and its growth potential (with an estimated 15,000 new beds to be added this year alone) adds an important new dimension to the ''health care industry.'' It seems clear that nursing home and hospital chains are moving toward substantial leverage in the medical marketplace.

Yet, isn't it passing strange that when the Washington bureaucrats and politicians deplore the imaginary controlling hand of the nation's physicians, they almost never extend their criticism to such giants of the industry as Beverly and HCA?

Thus doctors, who are individual practitioners with no threat of overweening bigness, may be denounced with impunity for undisclosed power over the marketplace, whereas giant chains get off scot-free.

Liberalism has indeed taken a curious turn in recent years, perhaps accounting for the fact that the Federal Trade Commission finds it much keener sport to attack doctors rather than giant chains. The crowds love it. ⊡

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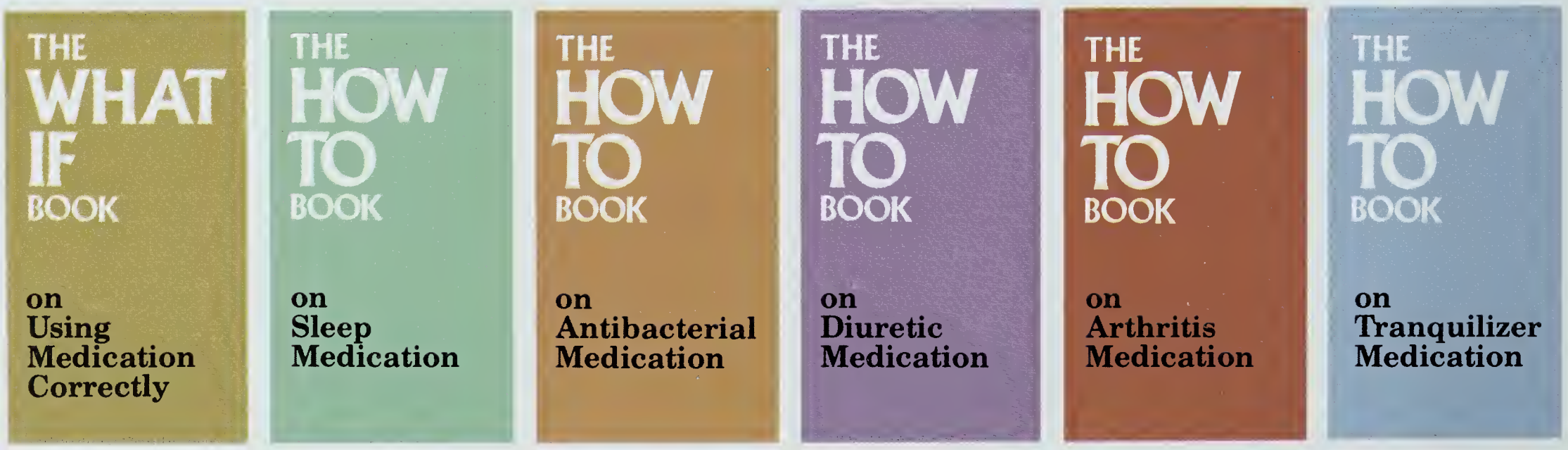
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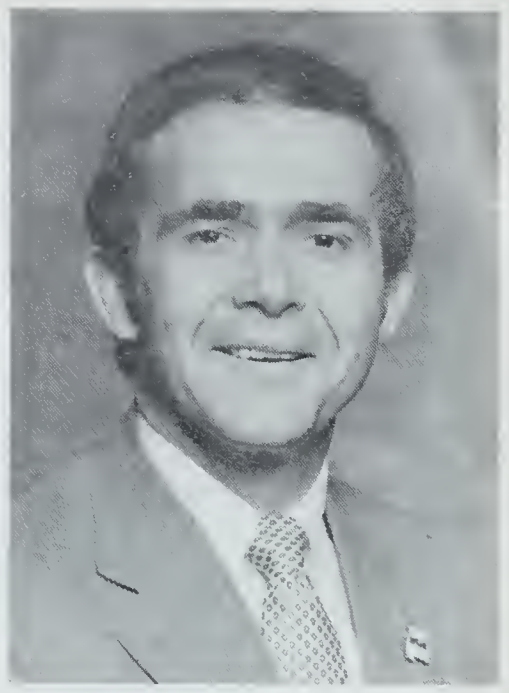
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PRESIDENT'S PAGE



Ronald E. Henderson, M.D.
President, MASA

Partners or Competitors

Editor's Note: The MASA-sponsored conference in Birmingham Sept. 18, "Competitors or Partners: The Changing Physician/Hospital Relationship," was organized and moderated by President Ronald E. Henderson, M.D. His column this month is drawn from his opening remarks on that occasion. Elsewhere in the Journal *this month, may be found the texts of the addresses by Joseph F. Boyle, M.D., Chairman of the AMA Board of Trustees, and Carolyne K. Davis, Ph.D., HCFA Administrator, who were among the principal speakers at the conference.*

The ideas and viewpoints presented here today may differ sharply, but I hope all of us can subscribe to the over-arching principle of medicine and a democratic society — that only through many opinions and diversity of interest and viewpoint can we ever arrive at a reasonable synthesis, if not a consensus.

The history of medicine, like the history of the United States, is one of endless controversy and divergent opinion. Just as the founding fathers built into the structure of our government and our constitution the mechanism of orderly debate and disputation, so has modern medicine wisely provided itself with methodologies for combating the errors of society and the profession.

Disraeli said something in a speech in the House of Commons a century ago that should guide all of us, whatever our point of view, in our discussions here today.

"The health of the people," Disraeli said, "is really the foundation upon which all their happiness and all their powers as a state depend."

If we can all agree on that simple premise, that our first concern, and our last one, should be the welfare of the people, any opinion addressed to this principle is one that reasonable men or women should consider. Any thought or idea that does not accept this as the first criterion is not a legitimate argument but a self-serving one.

It is almost trite to say that we live in a time of change, of geometric growth, not only in knowledge but in problems associated with the accelerated pace of almost everything. The impact of all this, on providers and consumers alike, is mind-boggling. Even as we plan to face the future, projections of what the future will be like keep changing. Nothing stays still long enough for us to examine it before it changes shape. Our state Health Officer, Ira Myers, perplexed by this phenomenon of perpetual change, has embraced what I shall call Myers Law.

"Whatever works," according to Myers Law, "won't work long."

On the rapidly changing landscape of American medicine, nothing is changing faster than the basic approach to the patient. Led initially by the medical-industrial complex, composed mainly of "for profit" hospital chains, most hospitals are now behaving as businesses rather than in the traditional roll of a service institution.

This business approach to medicine by hospitals represents a real threat to the private practice of medicine. Dr. Arnold Relman, Editor of *The New England Journal of Medicine,* has said:

"Physicians still hold the keys. Unless they reject entrepreneurialism, physicians risk losing the public's

continued on page 17

Dr. Durant: Parting Shots of a Dreamer

by William H. McDonald

Before leaving UAB to take over as President of the Fox Chase Cancer Center in Philadelphia Oct. 1, John R. Durant, M.D., unloaded on Gov. Fob James and President Reagan's New Federalism for their effect on research in particular and human progress in general.

Dr. Durant brought the Lurleen B. Wallace Comprehensive Cancer Center at UAB into being, and was its first and only director during his 14 years in Alabama. That time span also covered much of the major growth of the Medical Center, heady days of grants and funding that accounted for much of the expansion.

Dr. Durant came to UAB in January 1968, the same year that saw the widely mourned death of the state's first woman governor, Lurleen B. Wallace. When she died in May of that year, a groundswell of public affection for her seemed to demand a living memorial to her touching and courageous fight against cancer.

Dr. Durant, fresh out of an assistant professorship of Medicine at Temple (where he had received his M.D. in 1956), and following oncology fellowships in New York and Philadelphia, had been persuaded of the value of a free-standing center while at Memorial Hospital, New York.

Gov. Albert Brewer succeeded Mrs. Wallace at her death. An attempt was being made to collect the spontaneous outpourings of sympathetic offerings for the memorial to his predecessor. It was uncoordinated and fragmented, however, until Dr. Durant, the man with a vision and a mission, was pressed into service to head it.

He admits even today this seemed a bit odd. Here he was, an unreconstructed "liberal Yankee," as he puts it, having returned to a region he thought he had left forever when he finished his medical officer tour at Charleston Naval Hospital in 1960 — tub-thumping up and down Alabama, speaking to groups of 10 or 1,000 in the cities and at the crossroads and branchheads, stating the case for a living memorial to honor a woman he had never met.

He had never done anything of the kind before. But he had been impressed by the genuine public affection for Mrs. Wallace, who seemed to deserve the state's beautification of her as a kind of saint by popular acclamation.

In time, the drive netted $5 million in contributions and pledges. The federal government, greatly impressed, followed a planning grant with other *grants that were to total almost $30 million when Dr. Durant resigned last summer.*

Without that spontaneous outpouring of public sentiment for Mrs. Wallace, Dr. Durant believes today, "none of this would have happened." That was the seed money he took to Washington when he approached those who decide on grants.

"I asked, 'What can you do to help me?,' and they said, 'What are you going to do and how much do you have?' I said, 'I've got $5 million' and they said, 'We are very interested, of course.' "

That $5 million of locally donated money, most of it in small contributions, was the vital nucleus around which federal grants began to attach in very favorable ratios. People opened small bank accounts in all sections of the state, to which local citizens could con-

ribute in the name of Mrs. Wallace.

Banks would call in with small funds of $200 here, $100 there. Not even the largest major industrial contribution exceeded $100,000.

Professional fund raisers hired by Gov. Brewer had proclaimed, as a matter of immutable law, that one single gift would have to equal 10 to 20% of the goal if the goal was ever to be reached. That never happened.

Instead, as Dr. Durant recalls, many thousands of small, individual contributions filled the coffers "in testimony to what people felt about Mrs. Wallace."

He was impressed, so were the feds. The rest is evident in the sprawling $6.7 million Cancer Center opened in 1970, in the separate $3 million center for special cancer research, and in allied facilities.

In 1968, there was nothing. In 1982 there are 120 terminal degree people there, and the spin-off benefits are seen in genetics, molecular biology, nuclear magnetic resonance (NMR) research, in pediatric oncology, in immunology and virology, in biochemistry and pharmacology. All benefited enormously by that seed money and its magic growth.

It was against this background that Dr. Durant talked for an hour in his office in the Cancer Center shortly before he left it for Fox Chase. His disappointment in Gov. James was profound:

"The Governor created what I believe to be the present hostile environment toward higher education in general. But no one stood up to call him crazy — not crazy, but bad wrong.

"The silence on the part of the business community, the silence on the part of the economic structure of the state, was just deafening. The state's biggest asset was attacked by a political figure and nobody — *nobody* —rose to bring sense to it.

"When I said these things to a newspaper reporter, about the Governor behaving in an irresponsible fashion, apparently I touched a sensitive nerve, because he responded kind of violently. But several newspapers had editorials agreeing with me entirely."

Q. *To what do you attribute this silence on the part of the public and the business community?*

A. "I think the silence, at the time, was approval — certainly on the part of business people who often think you can run a university like a business. I think they now realize you can't do that, but the hostility has been created, the damage is done."

Q. *And you think this damage is enduring?*

A. "I think, and this is a private view, the New Federalism has arrived for sure. And that means what made this Medical Center blossom, the federal government, is gradually diminishing. If the states don't turn around and make up the difference, we have a real problem. And I don't see the states doing that.

"Eventually, the economy will recover — in spite of, because of, or oblivious to whatever is going on in Washington. When that happens, maybe things will be all right again, but I think it is going to be a long time.

"By contrast, where I am going [to Fox Chase], which is largely private, this institution will receive $800,000 a year indefinitely from the hepatitis B vaccine it developed. It will receive that amount every year indefinitely, from all over the world.

"Money spent in research will come back many times. The yield is enormous. There are many people around here capable of generating similar kinds of things, and similar returns, but if they get discouraged, that will not be very good for them."

Q. *But doesn't the fact of your leaving, in itself, have a chilling or even traumatic effect on students and entering people? Have you thought of this, that you should accept your slings and arrows and sweat it out for the benefit of the future in a spirit of self-sacrifice?*

A. "I suppose you can look at life like that. But my father taught me that when you put your finger in the water and you take it out there isn't any hole. I think this is a good institution, and it will attract somebody younger than me, with different ideas.

"I really am leaving for a better job. Every baby has to grow up and leave home. A thing is good if it can undergo a smooth transition of power and survive. Which, I think, is what Henry Kissinger says is the matter with the Russian government. It has never undergone an orderly, phased transition of power. It always has a sort of cataclysm. . . .

"But if this thing [the Cancer Center] is good, it will survive. Somebody who is younger and brighter and more energetic can probably see the future. The future does look good, but I'm impatient.

"If you look at it, the problems at Auburn are colossal too. That was a splendid asset. It has a good school of veterinary medicine, a good engineering school — or did have — but their plant and equipment are deteriorating, risking loss of accreditation.

"They have a chancellor there who is the Governor's man. Sixty percent of the faculty said he had no outstanding characteristic, but the guy is still there.

"Tuscaloosa has colossal problems too and we will here, although we are following behind. So, somewhere along the line, the private sector is going to have to turn to and help out. This is a tremendous asset, this place, and it contains the hope of the future. It is an attraction to industry and will make the whole state prosper.

"To overlook that, the hope for the future. . . .

"Anyway, that was my point in the newspaper interview. I was, and am, afraid they're going to allow this place to wither before they realize what they have done, while being proud of doing it. . . ."

Q. *Looking at the state climate you describe, and the national one as well, and the effects these will have on research — is it your belief that you could lose a generation?*

A. "Or more. The problem, as I see it, is that it is

affecting young people mostly. I'm all right. But young people — bright, smart young people — are going to leave the system. And once they are out of the research system, they don't come back in.

"The other part of it is that research has not only suffered from inflation, but it is also much more expensive to do. It simply costs more because so many more things can now be done.

"Maybe I've got too many stars in my eyes. But I think the world needs some visionaries, people who want to dream, who think of the next 10 years, the next 20 years, the next 100 years. When you just try and balance the budget every year. . . . You need some visionaries to counteract that.

"If what I have done here is any good, it will outlive me. And I am going to do what I consider the world's best job. Suppose I had made a lot of money in the last 14 years here, so that I had enough in investments to retire and do what I wanted to do: Do you know what I would do? I would want to do the job I am going to at Fox Chase, and I would do it for nothing. There I can dream with a bigger scope, I guess."

Q. *Are you quitting here while you are ahead, in the belief that the only way it will go here now is down?*

A. "No, I don't believe that. I think it could go up again. But I think that all that can be done here in the next five years or so is fine-tuning and I'm too impatient, too aggressive to want to sit around and fine-tune. . . .

"I think the fate of this Cancer Center is inextricably linked to the fate of this Medical Center. The one will be good if the other is good. There is no way to keep this Cancer Center good if the Medical Center doesn't stay really good."

Dr. Durant, 52, was born in Ann Arbor, Michigan. He took his B.A. from Swarthmore in 1952 and his M.D. from Temple four years later. It was while doing his two years in the Navy, 1958-60, that he became interested in oncology, for which he won fellowships at Memorial in New York and at Temple in 1962-67.

He believed then, and believes now, that the future is unlimited in cancer research:

"The questions of 'Why Cancer?' are the same questions as 'Why Life?' It seemed to me that the two were bound together, that cancer was an experiment of nature gone wrong. If you could learn what was wrong, you could probably learn what was right, and those were fundamental questions about life. Science has always learned a lot from disease; endochrinology, for instance, from acromegaly and pituitary dwarfism; from diabetes we have learned a lot about carbohydrate metabolism. . . .

"I thought then, and I think now, that during my lifetime there would be a lot of action. I am now more optimistic than ever. One of the processes involved in my decision to accept this position at Fox Chase was my excitement over the new biology.

"The new biology is going to cost a lot of money. But it's going to turn into a lot *more* money for society. And it's going to save lives, and heal disease, and prevent disease. And it's going to do a lot of things we can't even think of now. The place I am going to has a lot of these new biologists.

"Do you realize that one of the most important things that has happened was the report of the single case this year at Stanford? Using these techniques of the new biology, the people at Stanford were able to make an antibody to the specific molecular lesion in a lymphoma and give that mouse antibody to a patient, and it produced the intended response in the patient. That was the first example of the specifically tailored magic bullet.

"We have a lot of cancer cures, but this is the first specifically tailored magic bullet. Up to now we've been hitting at the thing with bludgeons. Now I think we have an opportunity to shoot at it with bullets.

"The opportunity to take advantage of this new technology is one of the things I am excited about in my new job. And another is something called immunopharmacology. They've just had the second international meeting in Moscow. It's a new field. What it is going to be is the pharmacology of the carrier, which will be these antibodies, usually monoclonal antibodies, which will be hooked to our traditional methods of treatment. But because we can direct them specifically, and raise the dose way up, you get more bang for the buck and less side effect.

"That technology, in my opinion, is going to revolutionize treatment in the next 10 years.

"I am already somewhat amazed at what has already happened in cancer *without* this new knowledge. The cure rate is somewhere around half of all new patients. It's the other half that is hard, but I look back to when I was a kid in this business and people with leukemia never even responded. And now about half the children, at least, are cured. We never saw any response in adult leukemia, and we've got people around here who have been cured sort of by accident.

"The new biology, at the molecular level, will be extremely expensive, but this institution was very clever. It recruited Bob Wells (Robert D. Wells, Ph.D.) to be chairman of biochemistry, and he will be part of that. He was the last person for whom we had enough money. He will be part of the explosion in the new biology. He was recently funded for a big fermenter so he can grow up all kinds of DNA to work with.

"I see that explosion coming. We are currently copying here the Stanford experiment and will begin to try to repeat it. I won't be here but it will go on. There will be a few places around that will be able to do that. And that's one of the things I'm turned on about. But I am disappointed in here in this state over the lack of vision. . . ."

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CONTRAINDICATIONS: Patients hypersensitive to ibuprofen, or with the syndrome of nasal polyps, angio-edema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory drugs (see WARNINGS).

WARNINGS: Anaphylactoid reactions have occurred in patients hypersensitive to aspirin (see CONTRAINDICATIONS). Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration, perforation, or gastrointestinal bleeding can end fatally, however, an association has not been established. Rufen should be given under close supervision to patients with a history of upper gastrointestinal tract disease, and only after consulting the ADVERSE REACTIONS.

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PRECAUTIONS: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If developed, discontinue Rufen and administer an ophthalmologic examination.

Fluid retention and edema have been associated with Rufen; caution should be used in patients with a history of cardiac decompensation.

Rufen can inhibit platelet aggregation and prolong bleeding time. Use with caution in patients with intrinsic coagulation defects and those taking anticoagulants.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy, this therapy should be tapered slowly when adding Rufen.

DRUG INTERACTION: *Coumarin-type anticoagulants.* The physician should be cautious when administering Rufen to patients on anticoagulants.

Aspirin. Concomitant use may decrease Rufen blood levels.

PREGNANCY AND NURSING MOTHERS: Rufen should not be taken during pregnancy nor by nursing mothers.

ADVERSE REACTIONS: Incidence greater than 1%. Gastrointestinal: The most frequent adverse reaction is gastrointestinal (4 to 16%). Includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of GI tract (bloating and flatulence). Central Nervous System: dizziness*, headache, nervousness. Dermatologic: rash* (including maculopapular type), pruritus. Special Senses: tinnitus. Metabolic: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS). *Incidence 3% to 9%.

Incidence less than 1 in 100. Gastrointestinal: gastric or duodenal ulcer with bleeding and/or perforation, hemorrhage, melena. Central Nervous System: depression, insomnia, confusion, emotional lability, somnolence, aseptic meningitis with fever and coma. Dermatologic: vesiculobullous eruptions, urticaria, erythema multiforme, Stevens-Johnson syndrome and alopecia. *Special Senses:* hearing loss, amblyopia (blurred and/or diminished vision, scotomata and/or changes in color vision) [see PRECAUTIONS]. Hematologic: neutropenia, agranulocytosis, aplastic anemia, hemolytic anemia (sometimes Coombs' positive), thrombocytopenia with or without purpura eosinophilia, decreases in hemoglobin and hematocrit. Cardiovascular: congestive heart failure in patients with marginal cardiac function, elevated blood pressure. Allergic: syndrome of abdominal pain, fever, chills, nausea and vomiting, anaphylaxis, bronchospasms (see CONTRAINDICATIONS). Renal: acute renal failure in patients with preexisting significantly impaired renal function, decreased creatinine clearance, polyuria, azotemia, cystitis, hematuria. Miscellaneous: dry eyes and mouth, gingival ulcers, rhinitis.

Causal relationship unknown. Gastrointestinal: pancreatitis. Central Nervous System: paresthesias, hallucinations, dream abnormalities, pseudotumor cerebri. Dermatologic: toxic epidermal necrolysis, photoallergic skin reactions. Special Senses: conjunctivitis, diplopia, optic neuritis. Hematologic: bleeding episodes. Allergic: serum sickness, lupus erythematosus syndrome, Henoch-Schonlein vasculitis. Endocrine: gynecomastia, hypoglycemia. Cardiovascular: arrhythmias (sinus tachycardia, bradycardia, and palpitations). Renal: renal papillary necrosis.

OVERDOSAGE: Acute overdosage, the stomach should be emptied. Rufen is acidic and excreted in the urine, alkaline diuresis may benefit.

DOSAGE AND ADMINISTRATION: Rheumatoid arthritis and osteoarthritis, including flareups of chronic disease: Suggested dosage 400 mg t.i.d. or q.i.d.

Dysmenorrhea: 400 mg every 4 hours as necessary.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for the relief of pain. *Do not exceed 2,400 mg per day.*

CAUTION: Federal law prohibits dispensing without prescription.

Dr. Durant remembered that just 10 years ago, when the Medical Center was developing its nuclear magnetic resonance (NMR) facility, it came up for its first review. The conclusion of that was that "it was a solution looking for a problem."

Now in 1982, Dr. Durant said, NMR has so many problems to work on it doesn't have time for them.

"As you know, NMR is going to replace CAT scanning very shortly and that guy got his Nobel Prize just in time."

[The 1979 Nobel Prize in Physiology and Medicine was shared by Alian M. Cormack, a physicist at Tufts, and Geoffrey N. Hounsfield of Great Britain for developing computerized axial tomography, which Dr. Durant now believes to be obsolescent.]

If the above encomium to the science of medicine suggests Dr. Durant is devoted to that more than anything else, the impression is wrong. Both his wife and his sister are cancer patients; so his interest is also very personal. What has impressed him most in all his years in oncology is the inherent worth of man:

"Over the years, I have learned from my patients that there is a hero in every common man. What some people will put up with to retain their life is unbelievable, and how they put up with it is often remarkable. They do it with strength, with dignity."

Q. *Then you were not surprised by the heroism of the "man in the water" at the Air Florida crash in Washington last January – the passenger who appeared in the water, helped others on the life raft until no room was left and then disappeared beneath the water?*

A. "No. I'll introduce you to 15 or 20 of them every time I have a clinic. This is commonplace. It is in everybody. Now it may not be seen because you may not be called on to demonstrate it. But it is in everybody.

"My wife, as you may know, got a breast cancer. She had positive nodes and she was put through our current blunderbuss. I expect that she is cured but we don't know that.

"That was hard on her, hard on me, hard on the family. I guess one of the things pushing me toward the use of the new biology is the realization of how hard the blunderbuss is on people, even though it's the only thing we have right now that works. That won't always be so. . . .

"My wife keeps telling me she is a coward because she is scared: *Of course* she's scared. So am I. But she's brave, although she says she is not. Well, bravery is a trait you observe in *other* people, not yourself. Lots of people are brave without knowing it. I have learned a lot, I have learned the most, from a lot of brave people.

"And it goes beyond that. Many people who are cured begin to live better lives, because they have faced some hard questions and made some tough decisions. They decide there is another dimension to life and they start helping other people. They discover that by helping other people they are helping themselves. They become happier, better people.

"And many of those who ultimately die from the disease become better people. Somehow they've gotten something out of the confrontation with life.

"That's another important thing about cancer: Not only does it ask important biological questions about life; it also asks important psychological and philosophical questions about life. . . ."

In response to a question as to how he got to be a dreamer, Dr. Durant is less certain:

"There must be something genetic that makes people dream. I had a cousin — my grandmother's sister was his mother — who was a very mysterious figure in my childhood. He was a visionary. Perhaps you have heard of him? His name was Paul deKruif. He dreamed too."

[Paul deKruif, the famous medical writer, died in 1971 at age 81 after hundreds of articles and many books on medicine and research. Earlier, he had been a bacteriologist at the University of Michigan. His books of the 20s and 30s, particularly, inspired many youngsters to set their cap for medical school or the laboratory.]

Q. *You have been a visionary here in Alabama. Certainly, you performed the work of a visionary. The Cancer Center was a dream. You made it a reality. But did things work out better than you expected?*

A. "Much better. But you seem to be trying to pin a label on me. I think, probably, that if you were going to give me any trait that helps make things happen, it is my faith in the future. The future will be better because of what we learn. I have a huge belief in the indomitability and the good of the human spirit, and in the dignity of life, and I have just never believed that we are not going on to better things, always. . . ."

That credo, in all its eloquent simplicity, is reason enough that, as Alabama says farewell to Dr. Durant as an adopted son, it may rest assured he will be heard from again. ⊡

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WARNINGS

CARDIAC FAILURE: In congestive heart failure, inhibition with beta-blockade carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. In patients already receiving digitalis, propranolol may reduce the positive inotropic action of digitalis and may have an additive depressant effect on AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, in rare instances, cardiac failure has developed during propranolol therapy. At the first sign of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and closely followed until threat of cardiac failure is over.

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised. Give special consideration to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Propranolol should be withdrawn slowly, since abrupt withdrawal may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta-blockade impairs the ability of the heart to respond to reflex stimuli. Except in pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery. In case of emergency surgery, the effects of propranolol can be reversed by administration of beta-receptor agonists such as isoproterenol or levarterenol, but such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e.g.*, CHRONIC BRONCHITIS, EMPHYSEMA), administer with caution, since propranolol may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta-receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA: Propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia, especially in patients with labile diabetes. A precipitous elevation of blood pressure may accompany hypoglycemic attacks.

USE IN PREGNANCY: Safe use in human pregnancy not established. Embryotoxic effects have been seen in animals at doses about 10 times the maximum recommended human dose.

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if propranolol is administered, since it may occasionally produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

Observe laboratory parameters at regular intervals. Use with caution in patients with impaired renal or hepatic function.

ADVERSE REACTIONS

Cardiovascular: bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type; thrombocytopenic purpura. *Central Nervous System:* lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics *Gastrointestinal:* nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis. *Allergic:* pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress. *Respiratory:* bronchospasm. *Hematologic:* agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura. *Miscellaneous* reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta-blocker (practolol) have not been conclusively associated with propranolol. *Clinical Laboratory Test Findings:* Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

HOW SUPPLIED

TABLETS

—Each hexagonal-shaped, orange, scored tablet is embossed with an "I" and imprinted with "INDERAL 10," contains 10 mg propranolol hydrochloride, in bottles of 100 (NDC 0046-0421-81) and 1,000 (NDC 0046-0421-91). Also in unit dose package of 100 (NDC 0046-0421-99).

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Store at room temperature (approximately 25° C).

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—Each ml contains 1 mg of propranolol hydrochloride in Water for Injection. The pH is adjusted with citric acid. Supplied as 1 ml ampuls in boxes of 10 (NDC 0046-3265-10).

Store at room temperature (approximately 25° C).

7997/882

Reference: 1. Freis, E.D. Hypertension (Suppl. II) 3:230 (Nov.-Dec.) 1981.

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President's Page

continued from page 7

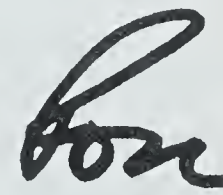
confidence and medicine could lose its function as an independent and self-regulated profession.''

The great microbiologist Max Dülbreck once defined parameter as being ''an ever-changing constant.'' As we discuss the applications of modern medicine, I want to make my personal bias clear from the outset. The profession of medicine, in my mind, is like Dr. Dülbreck's parameter, ''an ever-changing constant.''

Ancient principles of care never change. My duty to my patient will always come first to me. I can accommodate to many changes, but that is the physician's constant. I hope this will always be true, as it has been among conscientious doctors down through the ages.

Believing this as strongly as I do and restating my belief that our first duty is always to the patient, I am opposed to any change that would alter that relationship; any change that would destroy the right of free choice of physicians; any change that underminds the physician-patient relationship. Therefore, I do not believe that hospitals can practice medicine. I do not believe that any change that proposes this is a reasonable one. On that, and that only, my mind is closed. In short, my profession is not negotiable.

The theme of this conference is competitors or partners; the changing physicians/hospital relationship. It is my hope that the historic partnership will continue. If it does not and fierce competition develops, I cannot say with assurance who will win. I *can* say with absolute assurance who will lose — the patient.



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Dangers Lie Ahead

Joseph N. Boyle, M.D.
Chairman, AMA Board of Trustees

There is, in fact, a marriage between physicians and hospitals and related facilities that has existed for many years. Likewise, as in family domestic relationships from time to time, there are intrafamily differences and squabbles, but in the instance of this marriage, divorce is not a possible solution.

Many recent events, some social, some economic and some legislative, have precipitated myriad reevaluations of the traditional relationships between hospitals and physicians all over the United States. I therefore welcome the opportunity to enter into a dialogue with you this evening on this important subject.

At the outset, let us examine some ''givens.''

First, despite all of its shortcomings, despite many problems past and present, some of which as yet remained to be resolved, in this country we do have the finest medical care system ever, anywhere in the world. This includes hospitals, diagnostic and treatment facilities, medical doctors, nurses, technologists and all related personnel; and despite its cost, we apologize to no one for its excellence. Nor do we apologize for our determination to see to it that we continue to provide the American people the best that is available so far as that is humanly achievable.

Second, costs are a problem. We are now nearing expenditure of close to 10% of the gross national product. The slope of the curve of increase is steep. If carried to an illogical conclusion it, sooner or later, could reach some unacceptable percentage of national expenditures. At the present time, no one knows what an appropriate percentage is. Nor do we know to what degree the American people are willing to finance the cost of their medical and hospital care. We do know that, in all likelihood, there is a limit. We therefore accept a responsibility to see to it that the services we provide are delivered in the most economical and efficient fashion possible but with a basic premise that our primary objective is to provide ''care-effective'' medical services that are also cost-efficient.

Measurements of cost-effectiveness for the restraint of costs alone could be destructive of the system itself. We need only to look at Great Britain, where national policy limits the allocation of gross national resources to health at approximately 4.8%, and observe how that system is struggling to achieve even some level of mediocrity. Comparable pressures in Canada and other countries indicate that arbitrary limits on the cost for financing of medical and other health care have serious consequences on the quality of care that can be delivered and its accessibility.

A third ''given.'' Our primary concern must continue to be the quality of care that can be delivered. Rationing of necessary medical services is unacceptable, as is the stiffling of advances in medical technology or limitation of access to new technologies when they can be demonstrated to provide objective benefits in terms of restoration of health or enhancing the quality of life. Restricting or restraining the development of new technologies is equally unattractive.

We do agree that some means of rationalization of the use of new technologies and efforts to prevent wasteful and indiscriminant applications is essential, but we believe that the development of such rationalization should be conducted by professionals including physicians in practice, medical scientists and hospital administrators.

Fourth, it is unlikely that equal access to meet unbridled demand is ever an achievable goal, despite the fact that this may be a national ideal.

Fifth, any short-term or "mid-course corrections" or solutions to pressing immediate problems must be viewed in the context of their future impact on both quality and access as well as cost.

And while it is true that some techniques which are applicable to business and industry may be transferred successfully to the delivery of medical, hospital and other health care services, the majority of these techniques are limited in scope and value.

I am certain that you have your own list of "givens" and will be interested to hear your views, but I will list one final "given" upon which I believe we can all agree.

Times are changing! Things are changing and changing rapidly. Some of these changes are beyond our control, some we have an opportunity to shape. In the process, some traditional attitudes, roles and even players may not survive.

Are times ever changing? Reminisce with me a moment: Imagine circa 1950 that two Rip van Winkles went to sleep. One, the chairman of a medical staff, the other, the administrator of a large not-for-profit community hospital. Both awaken in 1982. Each meet their respective contemporaries.

Listen, as the former chief of the hospital medical staff meets his successor —

He:

"Good morning, young lady. The boss in? Got to talk to him about some things. Hope he's got the staff lounge spruced up — getting pretty tacky, you know.

"Need to firm up my OR starting times. Can't fill them all up for awhile but I can't let some young buck muscle in, you know.

"Also hope he's got some cushy job for me, Chief of surgery or something like that. I need to ease back into things.

"I've got some crazy notes from Medical Records about suspending me, unless . . . and a couple of other screwy letters about CME credits, liability insurance coverage, listing privileges requested, meeting attendance. A whole bunch of nonsense. It shouldn't take more than a couple of phone calls to straighten all that out.

"Oh, and by the way, how's the new administrator working out? I hope he knows his place by now. The last one was getting pretty pushy. Wanted to attend all the Executive Committee meetings. Revise the by-laws. Have some outfit called the Joint Commission come nosing around. Worrying about quality of care (as if that was any of his business). A whole bunch of other rubbish, you know! Took a little bit of straight talk, but he finally settled down."

She:

"Good to see you old timer. I am Dr. Helen Martin, president of the medical staff, you know.

"Can't spend too much time today, up to my tailgate in meetings.

"The Department Heads need to finalize the new IPA contract. The administrator wants to talk abou the Emergi-Center and the Outreach Diagnostic Center out in the North County. The Joint Practice Committee has its problems. The nurse practitioners are raising hell about some attendings countermanding orders and won't sign off on H&P's. The By-Laws Committee can't figure out where to put the podiatrists or the psychologists, much less the chiropractor.

"The Trustees have some bug on about some of our re-appointments. I must admit a few of them are over-the-hill turkeys, but maybe they'll let the staff can them instead of dumping them themselves.

"Need to make some notes for the General Staff Meeting tomorrow. Have to buck up the troops on medical records, CME, the JCAH inspection, new election procedure for department heads — must have university appointments, you know; no more reserved time in the OR, new limits for liability coverage, and the hospital attorneys want to beef up the risk-management program.

"What was that you were saying? Oh, the new administrator. One smart S.O.B. and one tough cookie. What with the new board chairman the staff is going to have to get better organized or we're going to lose control of everything — everything!

"Lounge? What lounge?

"Sorry, got to go."

He:

"I think I'll go back to sleep."

I will leave to you the discourse between Rip the hospital administrator and his or her contemporary since you probably know both of them much better than I. However, I will wager the contrasts are no less extreme.

Nonetheless, the shifts in perspective depicted in this mini skit are miniscule compared with other changes in the hospital and medical practice environment now upon us and coming.

The supply of physicians in the United States has increased drastically from 152 physicians per 100,000 population in 1971 to 194 in 1980. This will probably continue through 1990. Any changes in public policy or in the private education sector will take 8 to 12 years to produce any noticeable effect.

The structure of medical practice has likewise shifted dramatically. In 1969, there were 6,300 medical groups. In 1980 there were 10,800 of them involving over 88,000 physicians.

The multi-hospital system has emerged. You are

well aware of the multiple competing combinations and forms that this has produced and far better aware than I of both the economies of scale and the problems which have developed as well.

Investor-owned hospitals have increased substantially. Moreover, large sums of money, the capital necessary for future growth and development have been infused from major business enterprises such as hospital chains, insurance companies and others.

Because of both cost savings, quality of care and both physician and patient convenience, there have been major shifts from inpatient to outpatient care.

The diffusion of medical specialists away from major population centers and the development of well staffed, well equipped hospital facilities far distant from teaching centers and other urban centers of medical excellence has not only altered referral patterns between physicians and facilities but has had a major impact on patient supply both for urban hospitals and physicians practicing as members of staffs of those hospitals.

In some instances, hospitals have responded by establishing satellites either full range of service institutions or emergency centers, diagnostic clinics or others. And parenthetically, while this has provoked the ire of community physicians and medical societies, one must note that these expansions could not occur absent concurrence in or in many instances enthusiastic support of the medical staffs of many urban hospitals.

HMOs and IPAs. After five decades of indolent growth, prepaid practice has begun to expand rapidly. Though, as yet, no more than 10½ million persons are enrolled in such plans and while at present, over 100 out of 246 federally qualified HMOs are located in only six states, the expansion of multiple forms of prepaid practice continues at a rate of approximately 23% per year and in some communities, such as Minneapolis, constitute a major, if not the dominant, role of medical practice.

The courts have also revolutionized the rules of the game. Not only has it become clear that the professions are subject to antitrust laws, but the abilities of medical societies to influence modes of practice, monitor quality, impact fees and conduct serious peer review have been substantially diminished.

At the same time, the courts have said in effect that hospitals may with some exceptions enter into a wide variety of contracts with closed hospital staffs, high technology specialists, nonphysician personnel and a host of other arrangements, some of which remain to be challenged. And, the challenges may occur, but as yet, no physician or group of physicians has prevailed in law suits protesting alleged restraint of trade when hospital privileges are limited or exclusive contracts exist either for the maintenance of quality standards or economies of scale in a hospital's administration.

At the same time, the number of physicians under contract with hospitals has increased apace. At present, out of approximately 307,000 physicians engaged in patient care an excess of 190,000 of them have some form of contractural relationship with a hospital. More than one-half of these physicians (including physicians in training) are on a full-time salary.

In this milieu, relationships between physicians and hospitals can hardly be said to be improving.

Just as hospitals have extended their interests into outpatient care, satellite clinics and other enterprises, physicians likewise have shifted their practices to office surgery, surgi-centers and free-standing emergi-centers and complex diagnostic faculties. They have set up out of hospital high technology facilities such as CT scanners and other imaging techniques, comprehensive laboratories competing with nearby hospital laboratories and other similar services. Hospitals understandably resent such competition and wonder at the lack of loyalty to their institution by members of their own medical staff.

Over 90% of office based physicians are members of at least one hospital staff and spend on an average 20% of their working time in the hospital setting. About a fourth of them have some form of financial contract.

We have surveyed these physicians, both AMA members and nonmembers. Fifty-two and one-half percent of them report that they recognize a changing medical staff-hospital relationship and 65% of them characterize this change as negative in character. I note that at least one closed staff in a prepaid group has petitioned to be recognized as a labor union for the purpose of collective bargaining with the group plan which also owns the hospital in which they practice.

One can readily anticipate that, with the increase in physician supply, and with a parallel increase in large multi hospital systems, coupled with a decrease in sources to pay for services, hospital staff appointments will become very valuable indeed. Frictions may easily occur. Some hospital boards of trustees or hospital corporations or individual hospital administrators may seize upon this opportunity to exert extraordinary control over medical practice. Serious limitations on freedom of choice are not an illusory possibility and clinical medical decisions being based upon considerations other than professional judgment are not only possible but seem entirely likely.

A major concern of physicians, nowadays, is medical staff governance. Physicians view this issue as of paramount importance to the maintenance of professional judgment in the hands of physicians. MDs resist the concept of ''ultimate responsibility'' being vested in the hospital Boards of Trustees and challenge its legal validity. This is true despite several court decisions and multiple subsequent legal quasi-dogmas that have been generated. MDs are prepared to fight and they are prepared to fight in an organized fashion. ''Independence of medical staff governance,'' ''free-

dom to exercise professional judgment in the clinical management of patients,'' and ''peer review by real peers'' — these are not simple sloganism; they are fighting words.

Can we make some predictions as to where all this is going?

At this point, I must fall back on the comic strip *Peanuts*. Those of you who follow *Peanuts* are familiar with Peppermint Pattie, the perennial school dunce, and her little friend, Marcy, one of the better students in class. Peppermint Pattie says to Marcy, ''I've discovered the secret to it all. There are more questions than answers!'' To which Marcy replies, ''So?'' And Peppermint Pattie says, ''Well, just be sure you are the one who asks the questions.''

There are indeed more questions than there are satisfactory answers.

Once can envision a number of scenarios in this kind of climate. If the multiple forces involved in current social, economic and scientific evolution are permitted to enter a confrontation mode, we could, in a matter of several years without intervention by either the federal or state government, produce a model not unlike that system currently in place in the United Kingdom.

This may seem far-fetched, but consider theirs is a system in which the payors (government) contract with hospitals to produce a captive inpatient and outpatient system for all patients using hospital based physicians. All specialists with hospital privileges are under contract with the payor to provide specialty services, and all hospitals are under contract with the payor to provide inpatient and outpatient diagnostic and treatment facilities.

Substitue one payor (government) with several payors (large insurance firms such as Aetna who have already entered into a similar contract with Evanston Hospital just outside Chicago) and government (which currently proposes to enter into such contracts for Title 19 patients at least in California) and little difference remains.

Primary care such as that provided by family practitioners, pediatricians and other generalists without hospital privileges could easily be expected to provide service either on a capitation basis or with service contracts such as Blue Shield, Foundations for Medical Care, Title 19, Medicare, HMOs, IPAs or major insurers. Within a relatively short period of time those providing services on a capitation basis readily develop little or no incentive for productivity or personalized care or excellence. And so far as hospital based specialists are concerned, after a preliminary period of competition for premium positions and ''best hospital staff status,'' there very soon emerges no incentive or commitment to either excellence or productivity. In my view, the losers would be, one, the entire system including hospitals and physicians; and, two, the American public. This may sound far-fetched to you, but consider where the United Kingdom began a scant 34 years ago and where they are at present.

I can envision several other scenarios, however. In the most successful of these, both hosptials and physicians recognize their interdependent symbiotic relationships.

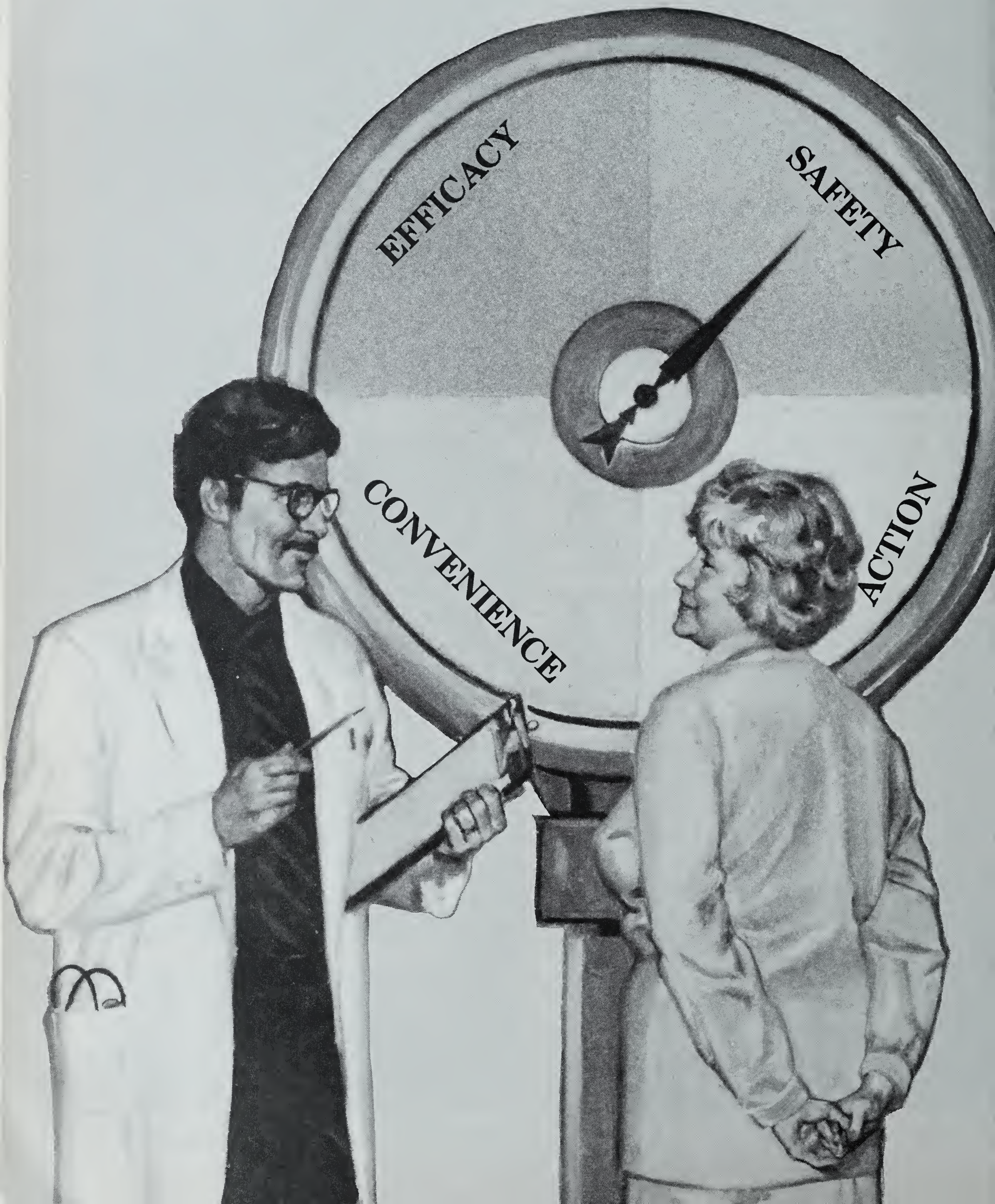
In this process, speaking only as a physician, I can say that indeed MDs will need to recognize as immutable equation in which: responsibility and authority (self-governance) begets accountability, which begets liability, which in turn begets responsibility, (self-governance). Participation in decisions that affect hospital structure, services, finances and continued viability may require a new kind of accountability but I am certain that American doctors have that ability. The concept that physicians are afraid of or unwilling to survive in an era of competition seems absurd to me. Given their educational background and competitive nature, given the fact that since the days they first sought admission to medical school, post-graduate medical training programs and as they entered into the medical market place, physicians have competed and will compete. From my acquaintance with physician colleagues all over the United States, they are prepared to do so in an extremely aggressive and effective fashion.

The American Medical Association, recognizing our changing times, recognizing the multiple forces exerting pressure upon the entire health care system in the United States, and also recognizing that at the present time, there exists no single constituency pressing for a specific change, believes that it is the ideal opportunity for all of us involved in the private health care sector to sit down and plan the soundest policy for the people of the United States on a long-term basis.

We have appointed a special task force assigned with the responsibility of developing a health policy agenda for the American people. We have assigned this the highest priority and are prepared to expend substantial sums of money in pursuing its development. We have identified as essential participants in this dialogue and development of a health policy agenda participation by representatives of the American Medical Association and all of the medical specialty societies in the United States, the American Hospital Association, the Federation of American Hospitals, the insurance industry, the United States Chamber of Commerce, the Business Round Table, organized labor, representatives of both state and federal government and a number of public members.

The scope of this project is indeed far-reaching. It is our intent to evaluate our entire health care delivery system and the structure upon which it is based beginning with pure and applied or clinical research on through undergraduate, post-graduate and continuing medical education, the organization and utilization of resources, the application of knowledge, supply, dis-

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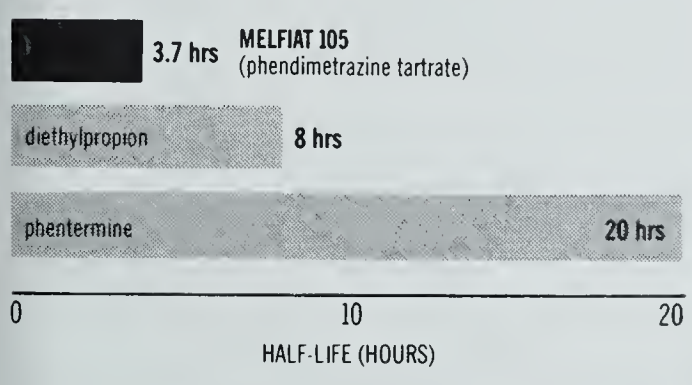


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References: 1. Sheu YS, Ferguson JA, Cooper JR: *Evaluation of the Abuse Liability of Diethylpropion, Phendimetrazine, and Phentermine,* unclassified document ADAMHA, HHS. Office of Medical and Professional Affairs, NIDA, 1980.
2. Douglas JG, Munro JF: The role of drugs in the treatment of obesity, *Drugs* 21:362-373, 1981.

MELFIAT® 105 UNICELLES® C III
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MELFIAT® 105 UNICELLES® C III
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INDICATIONS AND USAGE: Melfiat® 105 (phendimetrazine tartrate) is indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class (See CLINICAL PHARMACOLOGY) should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, symptomatic cardiovascular disease, moderate to severe hypertension, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors (hypertensive crises may result).

WARNINGS: Tolerance to the anorectic effect usually develops within a few weeks. When this occurs, the recommended dose should be discontinued. Phendimetrazine tartrate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly.

Drug Dependence: Phendimetrazine tartrate is related chemically and pharmacologically to the amphetamines. Amphetamines and related stimulant drugs have been extensively abused, and the possibility of abuse of phendimetrazine tartrate should be kept in mind when evaluating the desirability of including a drug as part of a weight-reduction program. Abuse of amphetamines and related drugs may be associated with intense psychological dependence and severe social dysfunction. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high-dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG, manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxication is psychosis, often clinically indistinguishable from schizophrenia.

USAGE IN PREGNANCY: The safety of phendimetrazine tartrate in pregnancy and lactation has not been established. Therefore, phendimetrazine tartrate should not be taken by women who are or may become pregnant.

USAGE IN CHILDREN: Phendimetrazine tartrate is not recommended for use in children under 12 years of age.

PRECAUTION: Caution is to be exercised in prescribing phendimetrazine tartrate for patients with even mild hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of phendimetrazine tartrate and the concomitant dietary regimen. Phendimetrazine tartrate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage.

ADVERSE REACTIONS: Cardiovascular: Palpitation, tachycardia, elevation of blood pressure.
Central Nervous System: Overstimulation, restlessness, dizziness, insomnia, euphoria, dysphoria, tremor, headache; rarely psychotic episodes at recommended doses.
Gastrointestinal: Dryness of the mouth, unpleasant taste, diarrhea, constipation, other gastrointestinal disturbances.
Allergic: Urticaria.
Endocrine: Impotence, changes in libido.

OVERDOSAGE: Manifestations of acute overdosage with phendimetrazine tartrate include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states.
Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma. Management of acute phendimetrazine tartrate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Acidification of the urine increases phendimetrazine tartrate excretion. Intravenous phentolamine (Regitine) has been suggested for possible acute, severe hypertension, if this complicates phendimetrazine tartrate overdosage.

DOSAGE AND ADMINISTRATION: Since Melfiat® 105 (phendimetrazine tartrate) 105 mg is a sustained-release dosage form, limit to one sustained-release capsule in the morning. Melfiat® 105 (phendimetrazine tartrate) is not recommended for use in children under 12 years of age.

HOW SUPPLIED: Each orange and clear sustained-release capsule contains 105 mg phendimetrazine tartrate in bottles of 100.

CAUTION: Federal law prohibits dispensing without prescription.

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tribution, functions, responsibilities and roles of the health professions and other occupations, technology, the delivery mechanisms and the process by which medical care is delivered including accessibility and availability of care, competition and markets, underserved and special populations, the responsibilities of the private sector, the responsibility of individuals, health promotion and preventive health care, physician hospital relationships and all aspects of payment for services including alternate delivery systems.

The methodology will be to assign to six separate task forces the responsibility of examining each of these issues in the context of basic principles that apply to each of approximately 75 policy areas. Once consensus has been reached upon principles, then specific policy questions will be addressed and we anticipate that there should emerge a rationalized, cohesive policy agenda which by force of the organizations involved in its genesis will become the health policy for the people of this country.

We believe that the time is long since past when we can examine each policy question in a vacuum. The impact of resources allocated to maternal and child welfare, neonatal intensive care and immunization programs have serious implications on the need for and utilization of resources in preventive medicine and acute and long term medical and hospital care, including such things as endstage renal dialysis, cardiac transplants, artificial hearts. The list is endless. This dialogue has begun and, while the task may seem gargantuan, we are optimistic of a successful outcome.

I cannot speak from the standpoint of a hospital administrator, but can in this only return to the "givens" discussed at the outset. *Given* that we have the finest medical and hospital care system in the entire world, one of which we are proud and justifiably so, one in which, while costs are a problem, we can, if committed to their rationalization, see to it that we do continue to provide *"care-effective"* albeit cost-efficient medical and hospital services; *given* that our primary concern must be to provide quality medical care, that rationing of necessary services or stiffling of advance in technology is not only unsatisfactory but is unacceptable; *given* that our commitment must be to continue to provide the highest possible medical care with the widest access reasonably achievable; and *given* that there are enormous changes taking place about us — I can only invite you to put your givens on the table as well.

I would suggest that the most appropriate forum in which to insure your input will be through representatives to the American Medical Association Committee for the Development of a Health Policy Agenda for the American people. It is our desire that there be the widest possible participation in the discussions and dialogue that we anticipate that will ensue.

We enter this with the anticipation that there will be differences of opinion at the outset, but we suggest that we need more than fire and friction, but rather a commitment as well. In this context, I can assure you that the AMA *is* committed. ⊡

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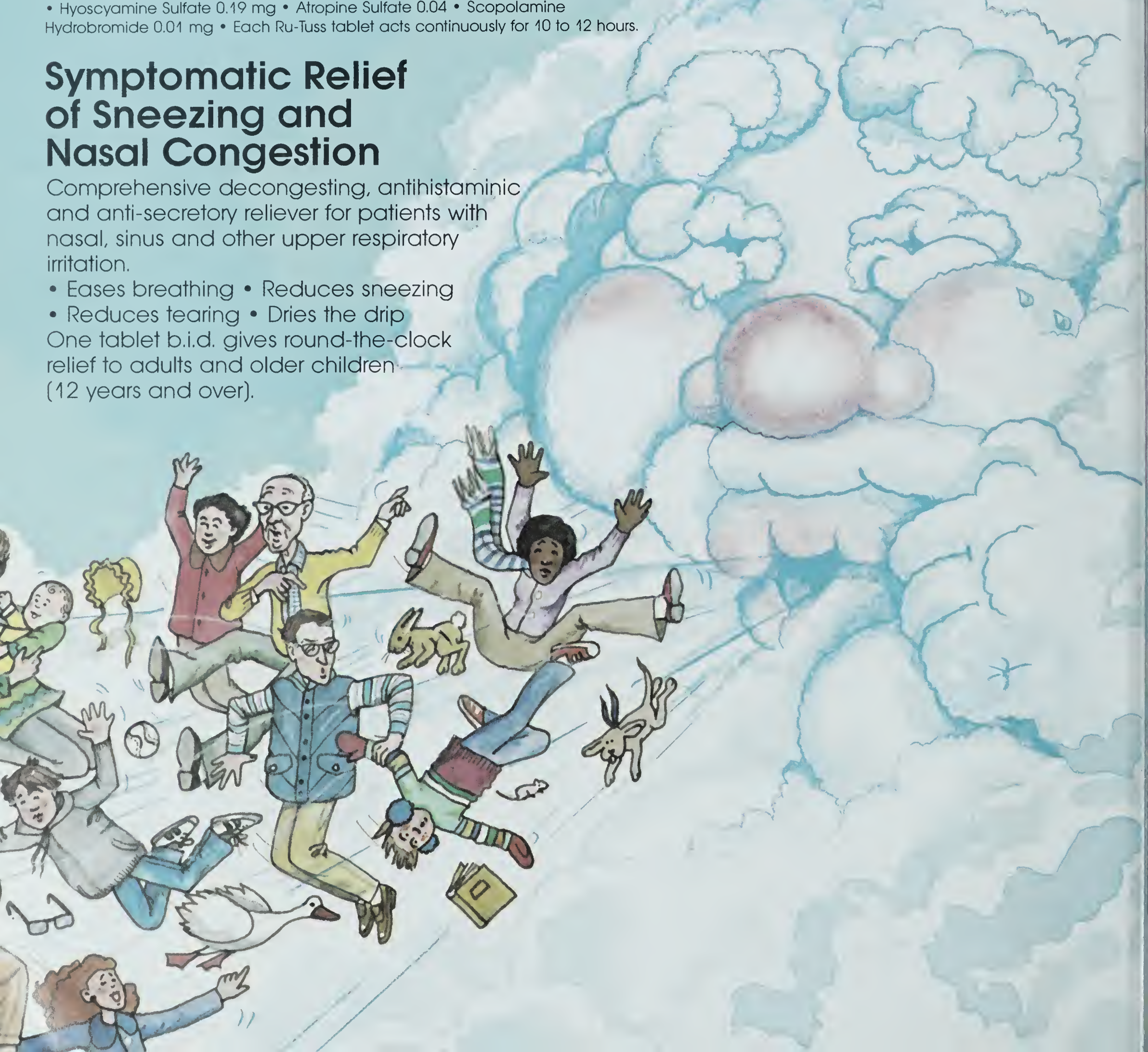
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Phenylpropanolamine Hydrochloride	50 mg
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Hyoscyamine Sulfate	0.19 mg
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Scopolamine Hydrobromide	0.01 mg

Ru-Tuss Tablets act continuously for 10 to 12 hours.

Ru-Tuss Tablets are an oral antihistaminic, nasal decongestant and anti-secretory preparation.

INDICATIONS AND USAGE Ru-Tuss Tablets provide relief of the symptoms resulting from irritation of sinus, nasal and upper respiratory tract tissues. Phenylephrine and phenylpropanolamine combine to exert a vasoconstrictive and decongestive action while chlorpheniramine maleate decreases the symptoms of watering eyes, post nasal drip and sneezing which may be associated with an allergic-like response. The belladonna alkaloids, hyoscyamine, atropine and scopolamine further augment the anti-secretory activity of Ru-Tuss Tablets.

CONTRAINDICATIONS Hypersensitivity to antihistamines or sympathomimetics. Ru-Tuss Tablets are contraindicated in children under 12 years of age and in patients with glaucoma, bronchial asthma and women who are pregnant. Concomitant use of MAO inhibitors is contraindicated.

WARNINGS Ru-Tuss Tablets may cause drowsiness. Patients should be warned of the possible additive effects caused by taking antihistamines with alcohol, hypnotics, sedatives or tranquilizers.

PRECAUTIONS Ru-Tuss Tablets contain belladonna alkaloids, and must be administered with care to those patients with glaucoma, or urinary bladder neck obstruction. Caution should be exercised when Ru-Tuss Tablets are given to patients with hypertension, cardiac or peripheral vascular disease or hyperthyroidism. Patients should avoid driving a motor vehicle or operating dangerous machinery (See Warnings).

OVERDOSAGE Since the action of sustained release products may continue for as long as 12 hours, treatment of overdoses directed at reversing the effects of the drug and supporting the patient should be maintained for at least that length of time. Saline cathartics are useful for hastening evacuation of unreleased medication. In children and infants, antihistamine overdosage may produce convulsions and death.

ADVERSE REACTIONS Hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia may occur. Other adverse reactions to Ru-Tuss Tablets may be drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerotomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, dizziness and insomnia Large overdoses may cause tachypnea, delirium, fever, stupor, coma and respiratory failure.

DOSAGE AND ADMINISTRATION Adults and children over 12 years of age, one tablet morning and evening Not recommended for children under 12 years of age Tablets are to.be swallowed whole.

HOW SUPPLIED:

Bottles of 100 Tablets	NDC 0524-0058-01
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Federal law prohibits dispensing without prescription.

RU-TUSS®
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DESCRIPTION

Each fluid ounce of Ru-Tuss Expectorant contains:

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Alcohol	5%

Ru-Tuss Expectorant is an oral antitussive, antihistaminic, nasal decongestant and expectorant preparation.

INDICATIONS AND USAGE Ru-Tuss Expectorant is indicated for symptomatic relief of upper respiratory congestion associated with pharyngitis, tracheitis, bronchitis, and allergic rhinitis. Also, for the temporary relief of symptoms associated with hay fever, allergies, nasal congestion and cough due to the common cold.

CONTRAINDICATIONS Hypersensitivity to antihistamines. Concomitant use of an antihypertensive or antidepressant drug containing a monoamine oxidase inhibitor is contraindicated.

Ru-Tuss Expectorant is contraindicated in patients with glaucoma, bronchial asthma and in women who are pregnant.

WARNINGS Ru-Tuss Expectorant contains codeine phosphate, therefore, the patient should be warned of the potential that this drug may be habit forming. Ru-Tuss Expectorant may cause drowsiness. Patients should be warned of the possible additive effect caused by taking antihistamines with alcohol, hypnotics, sedatives and tranquilizers.

PRECAUTIONS Patients taking Ru-Tuss Expectorant should avoid driving a motor vehicle or operating dangerous machinery (See Warnings). Caution should be taken with patients having hypertension, diabetes, hyperthyroidism and cardiovascular disease.

Caution should also be used in patients with pulmonary, hepatic or renal insufficiency.

ADVERSE REACTIONS Ru-Tuss Expectorant may cause drowsiness, lassitude, giddiness, dryness of mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension/hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerostomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, and insomnia Overdoses may cause restlessness, excitation, delirium, tremors, euphoria, metabolic acidosis, stupor, tachycardia and even convulsions.

DOSAGE AND ADMINISTRATION Adults: 1 or 2 teaspoonfuls, orally, every 4 hours, not to exceed 10 teaspoonfuls in any 24-hour period.

Children 6 to 12 years of age: ½ the adult dose, not to exceed 6 teaspoonfuls in any 24-hour period Children 2 to 6 years of age: ½ teaspoonful every 4 hours, not no exceed 3 teaspoonfuls in any 24-hour period. Children under 2 years of age: Use os directed by a physician.

HOW SUPPLIED: (16 fl. oz.)

Pint Bottles	NDC 0524-1010-16

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From the Cost Viewpoint

Carolyne K. Davis, Ph.D.
HCFA Administrator

Certainly the next decade in health care will be filled with changes, probably more than we have seen in the last several years, which makes the topic one of great interest.

I'm particularly pleased to join this group because I think we have a number of common interests. We all share a background in the delivery of health care services, and many of you may have shared my experiences in managing the provision of those services.

However, I would suspect that few of you have participated in the third leg of the health care triangle — that of being the third-party payer. I can assure you that the perspective of the bill payer, which I now have as Administrator of the Health Care Financing Administration, is a great deal different from anything I've experienced before.

Medicare and Medicaid make up the two largest health care programs in the country. Through these programs, HCFA helps to purchase health care services for nearly 50 million Americans. That's almost one-fifth of the entire U.S. population.

The federal budget has been growing at astronomical rates for several years, and a great deal of that growth has been fueled by expenditures for federal health care programs like Medicare and Medicaid. National health expenditures for 1981 were recently announced by HCFA as totaling $287 billion. *That amounts to $32 million per hour, 24 hours a day, 365 days a year and a 15% increase over 1980.*

In HCFA programs, we've seen increases in costs of anywhere from 15% to 18% a year since 1966. Rapid growth like this translates into some pretty startling statistics. For example, in all of 1967, the first full year of operation for Medicare and Medicaid, these programs spent $6 billion. For 1983, our budget of $74 billion works out to over $6 billion for each *month*. Medicare and Medicaid's share of total national health care expenditures equals roughly $9 million per hour.

Of course, health care expenditures in general, and not just Medicare and Medicaid, exert substantial pressure on inflation. Unfortunately, health care prices have not followed the recent decreases in the overall inflation rate. They continue to rise at a rate which is substantially ahead of the C.P.I. In FY 83, HCFA's budget will be the third largest in the government, consuming nearly 9% of the federal budget. With such a substantial share of the budget, Medicare and Medicaid are natural candidates for the Administration's efforts to control federal spending by slowing their growth rate. Slowing the rate of increase in Medicare and Medicaid expenditures does *not* mean abandoning our commitment to those entitled to Medicare and Medicaid. What it *does* mean is that we are working to make sure that Medicare and Medicaid continue to exist — not just next year, but 5 and 10 years from now.

However, getting a handle on health care spending is not an easy task for a variety of reasons. One of the difficulties is that nearly 70% of all health care services is paid for by third-party payers. This, in turn, insulates both providers and consumers of care from feeling the full effect of the cost of the services provided.

All of this "cost avoidance," if you will, has led to a

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health care financing system that does little to hold down costs. The traditional operating assumption, even before Medicare and Medicaid, has been, when somebody else is paying, why complain? Moreover, we have a health care system that does not respond to any of the traditional disciplines of the marketplace.

Clearly, we have to change the attitudes as well as the statutes and regulations which have brought us to our current financial situation if this country's health care financing system is to continue its success story.

And, in human terms, there is no doubt that Medicare and Medicaid have been very successful. These programs have met the challenges of quality and access that existed in the 60s and early 70s. Today, the challenge is to ensure Medicare and Medicaid's financial viability. If we don't slow the growth of these programs, then cost alone will certainly become the arbiter of health care for federal beneficiaries, and ultimately all of us.

We are seeking to reduce the growth of health care costs — both federal and private sector programs — by providing incentives for consumers and providers of health care to act in a more cost-conscious manner. Such initiatives are part of the Administration's overall competition strategy.

Unfortunately, the word ''competition'' sets off all kinds of bells in people's minds. To some, competition in health care seems to generate a fair amount of outright fear. But in truth, the competition strategy is not earth-shattering. The concept does *not* propose to make health care a freely traded commodity, nor place an undue burden on consumers by expecting them to be experts on health benefits or medical treatment. And it will *not* interfere with or intrude on traditional medical practice.

We simply hope to instill changes that will encourage greater cost sensitivity, that will give people an economic reason to seek less costly care and that will reward the providers who are the most cost effective. Far from being radical, these are the principles that guide the bulk of our economy.

The Administration is pursuing this kind of reform in a variety of ways.

Some of our proposals to revamp federal and private sector health care programs were enacted into law last year. Additional ones have been incorporated into the recently enacted Tax Equity and Fiscal Responsibility Act and more still will be in the next year's legislative agenda. In addition, HCFA's administrative agenda will continue to seek reform through regulatory channels.

Our actions are across the board because no one group is really to blame for high medical care costs. Everyone — consumers, providers and third party payers like Medicare and Medicaid — needs to participate in the effort to control health care spending.

The 1981 Omnibus Reconciliation began encouraging cost awareness at the state level by mandating a percentage reduction in federal medicaid reimbursement to states. It also provided for incentive rebates to states that had cost control programs and it offered states the flexibility to manage their programs better. We know this legislation is working because in the previous year, Medicaid outlays increased 23%. For FY 82, the increase is expected to be around 10%. Through better administration and taking advantage of increased flexibility such as waivers for home and community-based services and case management, states are continuing to provide services to their Medicaid beneficiaries, but obviously in a more cost-effective manner.

On the consumer side, last year's legislation resulted in some increased beneficiary cost sharing. This year's legislation increases the Medicare Part B premium to equal 25% of program costs, and in Medicaid, states will be able to impose nominal co-payments and have more flexibility to impose liens on the homes of permanently institutionalized beneficiaries with some limitations on when the liens could be executed.

We believe that provisions of this nature will help to improve the stability of the Medicare program, reduce unnecessary utilization in the Medicaid program and allows states to appropriately recover some of the costs of providing long term care.

But beneficiaries aren't the only ones who need to be more cost conscious. Health care facilities and physicians must also share the load. There is no question that hospitals have absorbed the lion's share of the combined Medicare and Medicaid budgets. Last year these programs spent more than $42 billion on hospital care. Thus, major attention is being given to the some 7,000 hospitals participating in Medicare simply because it is in this setting that the majority of Medicare funds are spent.

With hospital costs rising 18% between 1980 and 1981, I'm afraid I can't predict any easing of the pressure on hospitals to restrain their costs. As you may know, 40% of this year's health budget savings are due to Medicare Hospital Reimbursement limits. This year's congressional action makes substantial changes in Medicare hospital reimbursement by extending cost limits to include ancillary services and by placing a three-year limit on the rate of increase in reimbursement. The limit on the rate of increase establishes a ''target'' reimbursement system which will provide for financial rewards to hospitals whose costs are below their target.

In addition to changes in the cost limits, Congress also eliminated the nursing salary cost differential for hospitals and skilled nursing facilities and the subsidy on private rooms that Medicare currently allows.

Additionally, the secretary has been directed to develop and submit to congress by the end of this year a Medicare prospective payment system for hospitals and

skilled nursing facilities. This comes as no surprise to us since developing a prospective system for hospitals has been a priority for HCFA for the last six months.

The activities related to designing the final model prospective system for hospitals are continuing. In simplest terms, a reimbursement rate will be determined and the hospital will be expected to operate within that rate. Those facilities that can operate under their established rate will receive financial rewards and those who exceed their rate will then be at risk.

We believe that a prospective system would be far superior to the current cost-based, retrospective reimbursement method because it would be output-oriented and would definitely provide incentives for hospitals to be more cost conscious. But from the physician perspective, a prospective system will give you even greater responsibility in helping to hold down health care costs.

Following hospitals, physician reimbursements are the second largest HCFA expenditure — roughly 22% of our total budget. Nationally, some $54 billion in payments went to physicians in 1981. However, you have a much greater impact on health care costs than simply your individual reimbursements. *Over 70% of all health care spending decisions are controlled by physicians*. As I'm sure you have surmised, this impact will have even greater visibility in a prospective payment arena.

I expect that hospital administrators and trustees will be seeking your counsel even more frequently on how to best allocate available resources. Such a partnership will be absolutely vital to the financial viability of hospitals in the next decade.

I think that part of the physician's contribution to this partnership should include renewed emphasis on changing physician behavior as it relates to the utilization of health care resources. These ''gate-keeping'' decisions on hospitalization, diagnostic testing and referrals can have a tremendous effect on controlling health care costs.

Certainly, a significant area in containing health care costs through physician decisions is the ''technological imperative.'' Large batches of tests, generally paid for by a third party, have become an essential part of the defensive medicine now practiced. I do not presume to make recommendations as to what test or procedures are necessary, but I do submit that if the costs of such orders were more well known to the attending physician, some decisions would be affected. This premise has been supported by a recent GAO study which notes that courses in cost containment and continuing medical education programs can influence the physician's decision. We need more of these efforts to raise physician cost consciousness if we are to win the battle against runaway health care costs.

HCFA is also very interested in how our physician reimbursement policies affect physician behavior and ultimately, health care costs.

Increases in physician costs have not been as dramatic as the rise in hospital costs, but the increases have been generally higher than the rate seen in the overall CPI. From 1965 to 1978, the average annual rate of increase was around 10.5%. From 1979 to 1980, the rate slowed somewhat, but for 1981 increases in physician fees are again higher than the CPI.

Part of the reason for these ''above average'' increases is in the methods used to reimburse physicians. As you know, generally there are two methods — payment based on usual, customary and reasonable (UCR) data, and a system based on a fee schedule. About 25 states use fee schedules for their Medicaid programs and about half of all Blue Shield plans use this method. Medicare, of course, by law must use the UCR method.

UCR is not satisfactory to many physicians and third-party payers alike. Physicians frequently point out to me the problems found in determining the customary charge level, particularly with respect to specialty recognition. In addition, locality designation is also a source of concern. Third party payers like HCFA often find UCR difficult to work with, unpredictable and inflationary.

As you know, in the Medicare program the carriers are given the responsibility, and consequently the discretion, to determine localities. This delegation is based on the assumption that carriers are most familiar with their service areas. At present, there are some 250 different localities. This kind of ''crazy quilt'' configuration troubles us and we are working through possible alternatives.

Carriers also have a great deal of discretion in the area of specialty recognition. Of the 43 Medicare carriers, all but 5 recognize specialty differentials. As I mentioned, physicians in all types of practice comment about the differential. Some comment through their lawyers which has resulted in an inordinate number of law suits on this issue.

In Michigan, for example, where we *do* recognize specialties we were sued because we did not designate non-board certified family physicians as specialists. On the other hand, in Florida HCFA has been sued for *not* recognizing specialties. We lost in both cases, but we have appealed.

Naturally, we would like to avoid having the judicial system determine our reimbursement methods, but it is obvious that in order to do so we must look for systems reform. We will be looking to groups such as yours, for I think we also need to take a look at the value of cognitive skills. Currently, we pay surgeons more than physicians who use mainly cognitive skills in treatment. Here again, the government alone can't come up with the answers. We want full physician participation as we deliberate this.

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Another issue we're interested in is the assignment rate among physicians. In 1972, the assignment rate was 52.7%. It has reached a low of a little over 50%, but now for 1982 we're predicting 54%. Part of this increase is due to an increase in the overall number of physicians. More importantly, we want to understand more about why there is such a tremendous variation in assignment rates.

While assignment is mandatory in the Medicaid program, in Medicare 30% of physicians never accept assignment. In the past, HCFA has spent nearly $2 million in research dollars to understand physician reimbursement, but we still have not reached a final solution. We have, however, come up with some excellent data.

One of the things we've learned is that we pay urban physicians some 23% more than rural physicians. This type of an incentive does nothing to help decrease the number of medically underserved areas, nor does it support primary care. Clearly, this is not what we want to do. In addition, we have learned, from more than an analytical standpoint, the disadvantages of having so many different procedure coding and terminology systems in use. The bits and pieces of information on reimbursement are there, but we need to look at broader issues which we are beginning to do now.

Both within our regulatory agenda and legislative proposals, we are working towards reforming our system of physician reimbursement. In general, we will be looking for reforms that make the system more efficient, predictable and cost-effective, and will also provide incentives to improve the delivery system. We are just beginning this effort which gives groups like yours ample time to participate.

Conclusion

The need for reform in our health care financing system has made our plate very full. But I am greatly encouraged by the fact that we are not alone in our efforts to ensure its survival. There has been tremendous response by the private sector. Coalitions of business, labor, consumers and health care professionals are developing all over the country. I know that the Birmingham area has a very active group and I am following their activities closely.

While it has been said many times, it remains true for health care reform: "united we stand, divided we fall." We must not fall, but rather we must *change*. This Administration is ready to lead us through this period of change and I am confident of your support as we move toward a better system of health care financing. ⊡

Two Foundational Ideas for a Philosophy of Caring*

Robert M. Baird, Ph.D.
Department of Philosophy
Baylor University

A student, obviously distraut, came by my office. ''In terms of accumulated college credits,'' she said, ''I'm a senior, but I'm not about to graduate because I don't yet have a major. I have tried all the practical subjects I can think of and they don't interest me. So now I'm going to give the impractical subjects a chance and I thought I would start with philosophy.''

Less than a week later another young woman came by my office. ''I recently graduated,'' she stated, ''and for four years I took all the courses my parents insisted that I take. Now that I have finished, I'm returning to college to take the courses I want to take, courses that are really practical, and I'm going to begin with philosophy.''

What I want to claim, of course, is that the second young lady, not the first, had the right idea. Contrary to widespread belief, philosophy is a practical enterprise, for philosophy more than any other discipline is concerned with those values in terms of which we define ourselves, structure our lives and relate to other people. And what could be more practical than issues such as these.

I raise the question of the practicality of philosophy in the very beginning because — to be quite up front about it — I'm not sure what your experience with philosophy has been. As one writer has put it: ''Philosophy and medicine appear poles apart [to both philosophers and doctors]. Medicine is highly specialized and practical, philosophy utterly general and of no (direct) use to anyone.''[1]

If this is your attitude, that is, if you view philosophy as an impractical discipline irrelevant to fundamental human concerns, my fear is not that I will lose you somewhere along the way; my fear is that I will never have you to begin with. So if you do view philosophy with a jaundiced eye, let me request at least a temporary suspension of that judgment. And I will try to make clear the practical implications of the philosophical perspective I'm going to advance under the title ''Two Foundational Ideas for a Philosophy of Caring.''

One other preliminary word. Some of my favorite philosophical readings are the early dialogues of Plato in which Socrates is the main character. The basic format of those dialogues is much the same. Socrates encounters an individual who claims to know a great deal. Acknowledging his ignorance, Socrates asks to be taught. Eagerly, the one who claims to know begins the instruction. Socrates then raises a question here, makes an observation there, raises another question elsewhere, and soon it becomes clear to everyone present that the one who claimed to know, knows very little.

My particular favorite is the dialogue entitled *Euthyphro*. Socrates encounters the young, pompous

* Keynote speech, third annual meeting of the Alabama Society of Clinical Oncology, Aug. 6, 1982, Montgomery, Ala.

Euthyphro at the Athenian courthouse early one morning. In response to Socrates' query about why he is there, Euthyphro says that he is in the process of prosecuting his own father and adds that the act of bringing his father to account is itself an act of great piety. At that point Socrates commends Euthyphro for his courage and wisdom and for the piety which he claims. By the way, asks Socrates, what is piety anyway? And with that question Socrates opens the way for a conversation in which it turns out that Euthyphro is quite confused about what genuine piety comes to, even though he is prosecuting his father precisely because he thinks to do so is an act of piety.

I mention this incident because I want to make clear in the beginning that I have no intention of playing Euthyphro to a room full of Socrateses. I would not want my presence here to be interpreted as a public declaration of my expertise in the field of caring and as an announced intention to teach what I know. I can hear someone asking in an off handed way, "Say Baird, what is effective caring anyway?" And soon I would find myself dialectically impaled.

So let me get my disclaimers about being an expert out on the table right off. After all, you are the health care professionals. Caring is the task you are constantly about, and there is some presumption in my talking to you about your daily task. Nevertheless, I will not shirk my role here. I do have some ideas about caring, about effective caring. I think they are foundational ideas for a philosophy of caring. But in the spirit of Socrates, I offer them not as dogma divinely sanctioned, but as proposals to be considered and evaluated. My hope is that you will find something of value here.

I

Let me introduce the first idea or principle by recounting a personal experience. In the summer of 1958 I was involved in a chaplain's extern program in the Baptist Hospital in Little Rock, Arkansas. The externship was under the direction of an unusually enlightened and sensitive chaplain, Dr. Don Corley. I had been in training only a few weeks when a woman, quite agitated, came by the chaplain's office. She reported that she and her husband had just been told that he had a terminal illness. This was doubly disturbing to her, she said, because her husband, as she put it, "was not a Christian."

What she wanted one of us to do was to go to his hospital room and "convert him." "Nothing else matters," she said. "That is the only need he has now — the need to be saved." Having received our assurance that we would visit him, she departed. Corley then asked me if I would be willing to see the patient. When I agreed, he inquired, "What do you think you can do for that man? What role can you play in his life at this point? What do you think his needs really are?"

Corley used this and other experiences in leading me to see that regardless of what anybody else says a person has need of, the revelation of need must ultimately come from the individual himself. Corley thus convinced me that one of the cardinal principles of caring is that one should never enter into a caring relationship with another with a set of presuppositions about the needs of that person. The first responsibility in any caring relationship is to be open to the other in such a way that the other may freely reveal who he is and where he is in terms of his own genuine needs.

Since this matter arose for me within the context of caring for a man who was dying, let me reinforce this principle of effective caring by focusing on the issue of death and dying.[2] I want to do this in terms of three existential analyses of death: the analyses of Leo Tolstoy in his famous *The Death of Ivan Ilych,* Jean-Paul Sartre in his short story *The Wall,* and Martin Heidegger in his existential classic *Being and Time*. My consideration of each will be brief.

In his work *The Death of Ivan Ilych* Tolstoy explores an attitude toward death which may be described straightforwardly as the attempt to deny death's reality. Through the thoughts of Ivan's friends Tolstoy expresses this attempt to conceal the personal and concrete reality of death by always allocating death to the other person. Ivan's death, says Tolstoy, "aroused, as usual, in all who heard of it the complacent feeling that, 'It is he who is dead and not I.' Each one thought or felt, 'Well, he's dead but I'm alive.'"[3]

Upon viewing Ivan's body, Peter Ivanovich, one of his closest friends, thought that Ivan's dead face expressed a warning, but Peter was convinced that the warning was "at least not applicable to him."[4] Upon reflection, however, Peter became momentarily terrified at the thought that what had happened to Ivan might also happen to him, but then Peter consoled himself with "the customary reflection . . . that this had happened to Ivan Ilych and not to him, and that it should not and could not happen to him. . . ."[5]

But the point Tolstoy is really concerned to emphasize is that Peter and the others (who after all were not knowingly facing imminent death) were only going through the same form of self deception that Ivan (who at one level of awareness at any rate knew that he *was* dying) had attempted.

The syllogism Ivan had learned: " 'Caius is a man, men are mortal, therefore Caius is mortal,' had always seemed to him [Ivan] correct as applied to Caius, but certainly not as applied to himself. That Caius — man in the abstract — was mortal, was perfectly correct, but he was not Caius, not an abstract man, but a creature quite, quite separate from the others. . . . 'Caius really was mortal, and it was right for him to die; but for me . . . Ivan Ilych, with all my thoughts and emotions, it's altogether a different matter. It cannot be that I ought to die.' "[6] The personal reality of death is denied, argues

Tolstoy, by allocating it to the indefinite future of the indefinite other.

Another attitude toward death is suggested by Jean-Paul Sartre in his short story *The Wall*. The prisoner, Pablo, is sentenced to die. ''I'd never thought about death,'' he reflects, ''because I never had any reason to, but now the reason was here and there was nothing to do but think about it.''[7] For Pablo death is discovered to be a wall beyond which one cannot go. Indeed, death is a wall beyond which Pablo cannot even mentally project himself. Repeatedly Sartre makes the point that Pablo who knows he is going to die is different from one not confronted by imminent death, and the difference is that the latter can ''think about tomorrow.''[8] Pablo cannot. ''As soon as I tried to think of anything else,'' he says, ''I saw rifle barrels pointing at me.''[9]

One of the implications, argues Sartre, of this difference between the living and the imminently dying is the breakdown in communication between the two. In the most incisive passage in the story, Pablo is thinking about his girl. ''I had no more desire to see her,'' he says, ''I had nothing more to say to her. . . . If she looked at me *now* the look would stay in her eyes, it wouldn't reach me. I was alone.''[10] The dying, argues Sartre, is alone because he cannot communicate with the living. A fundamental characteristic of the living *is* to project into the not-yet, to focus mentally on the future. But this is precisely what the dying person, claims Sartre, cannot do. He is confined to the now, the present moment, hemmed in by the barrier of death. The living and the imminently dying, therefore, live in two different worlds, characterized by radically different perspectives. For the living, eyes are focused on the future. No wall bars the way. For the dying, there is no future. The wall, that is, death, has eliminated it. Tragically, communication is impossible. Blocked from the future, the dying is severed from the future-oriented living, and he is, for Sartre, quite alone in an inevitable aloneness.

For a third possibility consider the view of the German existentialist Martin Heidegger. Like Sartre, he acknowledges that death is a boundary and he acknowledges that there are destructive responses to this wall. But Heidegger also argues that confrontation with death can be creative. Indeed, Heidegger argues that one's whole life ought to be structured around the anticipation of death. For when an individual takes seriously his own death, he becomes intensely aware that his life is limited, and he is encouraged or motivated, thereby, to employ his alloted time creatively. Not a morbid brooding over one's inevitable death,[11] but rather an honest acknowledgement of one's own finitude is the attitude encouraged.

So, Heidegger claims, if one encounters a genuinely authentic individual, one will discover a person who lives his life thoroughly conscious of his own inevitable confrontation with death. Such an awareness will express itself in a life style that refuses to while away time with trivia and unessentials, in a life style that creatively copes with the moments that are yet available. The acknowledgement of the reality of death for such a person serves as a stimulus for creatively getting on with the important and crucial matters at hand.

Here are three different descriptions of how people confront death. Tolstoy describes one who denies the reality of death. Sartre describes one who encounters death as a wall which prohibits projecting into the future and, thus, prohibits communication with others. Heidegger describes one who accepts death in a way that liberates the individual to deal creatively with the life remaining.

The point to be made is not that one of these three descriptions is correct and the other two wide of the mark. Not at all. All three are valuable as portraits of different ways people actually encounter the reality of death. And surely, these three responses do not exhaust the possibilities. Indeed, those of you who care for dying patients day in and day out could recount additional ways people confront death. All of which leads to what in one sense is a very simple but nevertheless an overwhelming important conclusion, namely, that in any caring relationship with one who is dying, the first responsibility is to be open to the individual in order that he may be permitted the saving luxury of revealing where he is in terms of his own attitude toward death.

Only then can one care in a fully responsible and sensitive way. For surely it is evident that the immediate emotional needs of one who is denying death or the emotional needs of one who confronts death as a wall inhibiting communication or the emotional needs of one who is motivated by death to live creatively are different. How crucially important, then, is that openness toward the other which permits the dying to reveal his own way of facing death and his own needs at the moment of dying.

Moreover, what has been said about caring for the dying can be generalized with regard to all caring relationships. Of fundamental importance in any caring relationship is the principle of genuine openness toward the other that allows the other to reveal who he is and where he is in terms of his own needs. There is no more important principle of caring than this.

II

Let me introduce the second idea or principle by recounting the experience of someone else. His name was Johnny Gunther, Jr. He was seventeen years old. He was dying of a brain tumor and he wrote a poem entitled an ''Unbeliever's Prayer.'' It goes like this:

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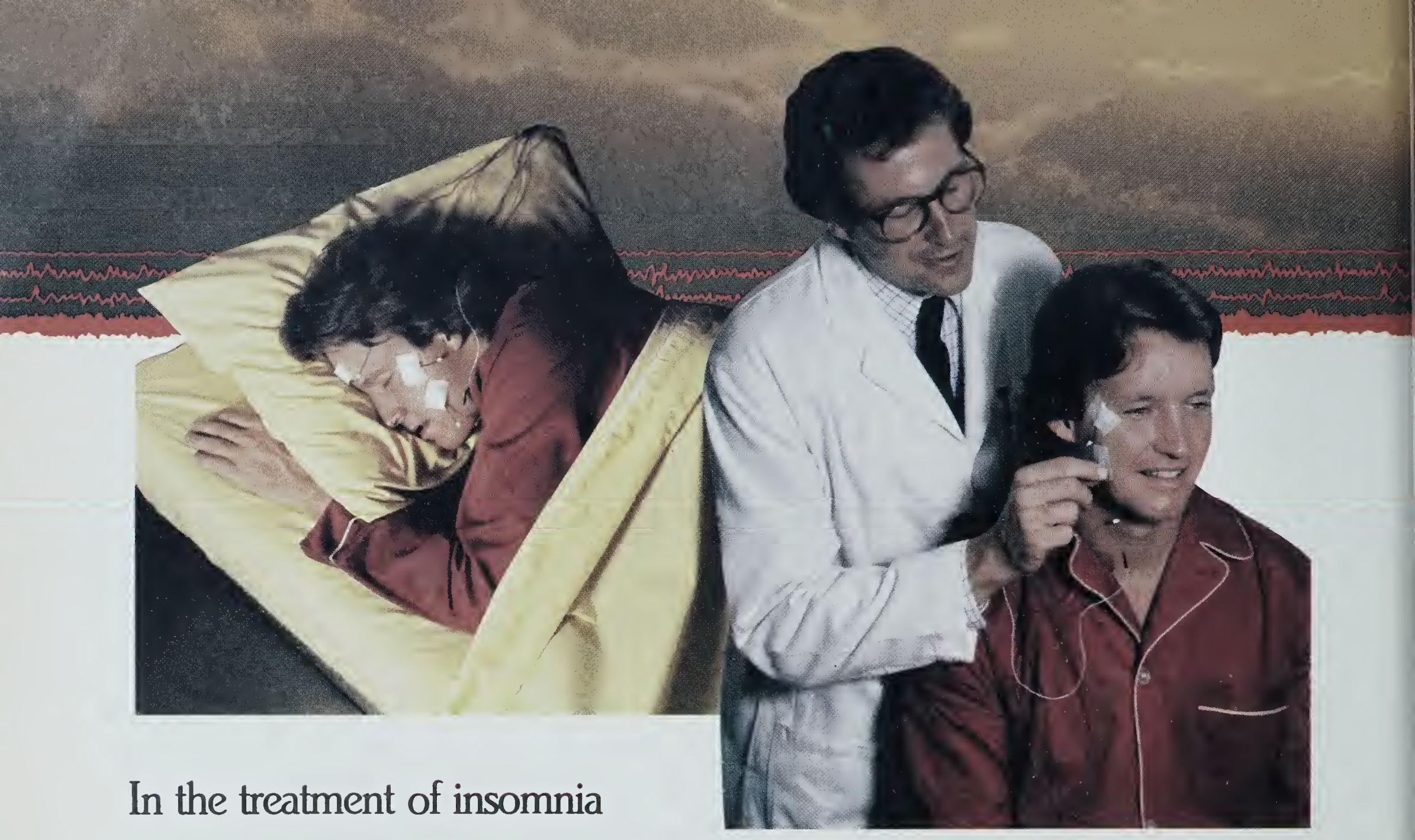
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sion and/or ataxia increases with larger doses in the elderly, it is recommended that the dosage be limited to 15 mg.

Moreover, the efficacy and safety of Dalmane for the treatment of insomnia have been demonstrated in thousands of patients with a variety of primary medical conditions, including cardiovascular, neuropsychiatric, endocrine-metabolic, gastrointestinal, genitourinary, respiratory and musculoskeletal disorders.[1] Dalmane (flurazepam HCl/Roche) is contraindicated in pregnancy and in patients hypersensitive to the drug.

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to fight the good fight. Amen.[12]

Johnny Gunther, as a result of his own journey through the valley of pain and fear experienced within himself the hiddenness, the absence, the silence of God. Cannot we understand? Cannot we for a moment imagine what it would be like to be a seventeen-year-old knowing that life was almost over? Is it any wonder that in such circumstances the very existence of an all loving and an all powerful God becomes problematic.

This is what is called in philosophy the problem of evil. Technically the problem is formulated as follows (in one form or another you have all heard it): if God is all good, he must want to eliminate evil (pain, suffering, and death). If God is all powerful, he must be able to eliminate evil (pain, suffering, and death). But evil exists; therefore, God is either not all good or He is not all powerful. In fact, when this argument is advanced, it is usually intended to suggest that there simply cannot be a God, given the extent of evil in the universe.

Such a conclusion grows out of the experiences of people who have known such pain and suffering that they have cried out in agony: How can there be a God of power and love who created a world like this? Who could believe this universe is governed by power and goodness?

These questions emerge out of genuine anguish. I'm not referring to superficial cynicism or shallow atheism, but the honest anguish that grows out of that dark night when the soul is overcome by despair.

Some time ago a person told me in a cavalier fashion that anyone who questioned the existence of God was morally bankrupt. I just don't believe that. Such a judgment does not take seriously the depth of human pain and suffering.

It does not take seriously that descent into darkness of the father whose daughter, the very light of his life, has leukemia, or the agony of the mother whose son has just died, or the despair of the college student who is so lonely he takes his own life, or the suffering of the teenager abused by her parents, or the pain of parents rejected by their children. There *are* moments of darkness darker than a thousand midnights, and the cry of the human soul in the midst of such darkness is not to be despised or to be treated lightly.

Now I do not propose here to deal systematically with the general problem of evil. But I do want to advance a second idea or principle of caring, the significance of which can only be understood against the background of this problem.

Eric Cassell, MD, Clinical Professor of Public Health at Cornell University Medical College, maintains that the sick person raises three basic questions: "What is wrong with me? Why did it happen to me? What is going to happen because of this thing that has gone wrong?"[13] It is that second question, Why did it happen to me? that we want to focus on for a moment, for it is that question which raises the problem of evil. One way of sensitively responding to this question involves a second foundational principle for a philosophy of caring.

Before developing this principle, let me make a couple of prefatory remarks. First, the principle *is* controversial. Some will reject it because it will appear incompatible with a certain understanding of the power and sovereignty of God. If, for example, one believes that every natural event is divinely willed or ordained then the principle to be proposed will appear highly problematic. Second, even if one accepts the principle, the decision to use it must be governed by the priority of the initial principle, namely, that the genuine needs of the patient must determine the caring response.

With these observations in mind, let us turn to this second principle. When someone is in pain, when someone who is suffering or facing imminent death asks "Why me?" there is a human tendency to respond in a way that tries to make sense out of it all. It seems to be part of our nature to want things to hang together in an orderly, rational fashion.

Indeed, it was the belief that there is a sense to life that gave birth to philosophy. It was the belief that nature is orderly that gave birth to science. It was the belief of Hippocrates that disease would give way "to reason based on observation"[14] that gave birth to the age of medicine as we know it. Obviously this belief has been productive. So when a person in agony asks "why me?" we look for a reasonable explanation. And since the "why me" question drives us to ultimate metaphysical considerations, the reasons offered often have a religious character to them.

In this attempt to make logical (indeed, theological sense out of human misery), answers such as the following have often been forthcoming. Suffering, some have claimed, is the consequence of sin. Or, God is simply testing you. Or, God must love you with a special love to have chosen you for this burden. Or, in the long run, you will see, it will be for the best. Or, seen from a broader (God's eye) point of view what appears to be bad is really good. Or, don't worry, ultimately God will reward the righteous and there will be special compensation for those who have suffered. Or, I know he died young, but that just means he will be with God sooner. Or if all else fails, one can always respond: I don't know why this happened but surely God has His reasons, for all things happen according to His will.

Now I'm not concerned here to exhaust the possibilities or to evaluate in detail these responses. But notice the assumption that undergirds them all, namely, that

each instance of pain and suffering and death can ultimately be accounted for in God's rational scheme of things, that in the last analysis it can all be understood in terms of God's will. And philosophical humility would have to acknowledge maybe so. But given the assumption of God and the assumption that love is the most essential attribute of God, and given the intensity of certain experiences of pain and suffering in the world, the claim that every event is divinely ordained seems mistaken. So I want to advance as a second foundational idea for a philosophy of caring the importance of acknowledging chance and randomness in the universe. And I want to indicate why this acknowledgment can have a constructive impact on our caring for others.

Let me briefly develop this line of thought by referring to a book which has recently become a best seller. The work by Harold Kushner, a Jewish Rabbi, is entitled *When Bad Things Happen to Good People*. Kushner's writing is in memory of his son Aaron who died at 14 of progeria, the "rapid aging" disease. As a result of that experience and as a result of ministering to others in their suffering, Kushner has intensely confronted the problem of evil.

And my suspicion is that his book has become a best seller because he courageously makes a point some suffering people have ached to hear. And it is precisely that point that I want to refer to as a foundational idea of effective caring.

Kushner begins by assuring the reader that this very personal book is "written by someone who believes in God and in the goodness of the world, someone who has spent most of his life trying to help other people believe, and was compelled by a personal tragedy to rethink everything he has been taught about God and God's ways."[15] Kushner then proceeds to raise the basic question: "Why do bad things happen to good people?"[16] And his response is that there is no logical or theological accounting for all pain and suffering and death.

> Can you accept [Kushner asks] the idea that some things happen for no reason, that there is randomness in the universe? Some people cannot handle that idea. They look for connections, striving desperately to make sense of all that happens. They convince themselves that God is cruel, or that they are sinners, rather than accept randomness. Sometimes, when they have made sense of ninety per cent of everything they know, they let themselves assume that the other ten per cent makes sense also, but lies beyond the reach of their understanding. But why do we have to insist on everything being reasonable? Why must everything happen for a specific reason? Why can't we let the universe have a few rough edges?[17]

Kushner argues, for example, that a

> man's ejaculate swarms with tens of millions of sperm cells, each one carrying a slightly different set of biologically inherited characteristics. No moral intelligence decides which one of those teeming millions will fertilize a waiting egg. Some of the sperm cells will cause a child to be born with a physical handicap, perhaps a fatal malady. Others will give him not only good health, but superior athletic or musical ability, or creative intelligence. A child's life will be wholly shaped, the lives of parents and relatives will be deeply affected, by the random determination. . . .[18]

It seems to me that Kushner is quite right. There are chaotic occurrences in the stream of events which appear to stand independent of the will of God or divine ordination, destructive events for which there is no logical or theological accounting.

The question now is: what if one accepts this point of view? What if one acknowledges that there is a random and sometimes tragic edge to the universe that somehow lies outside the will of a good and loving God? What are the implications of this for a philosophy of caring? What foundational idea for caring is embedded here?

When disaster strikes and the one who suffers asks "Why me?," what is often needed is a compassionate response that honestly acknowledges that life is sometimes "terribly tragic and unfair."[19] The reason this response can be so important is because of the evidence that what people fear most in the midst of pain and suffering and the approach of death is loneliness.

One way of radically breaking into that loneliness is by showing that we so identify with the one who suffers that we are aware of his or her feelings of injustice and unfairness. As indicated a moment ago, my belief is that the primary reason Kushner's book has become a best seller is because he has spoken a word people need to hear. Many people feel in the midst of tragedy that their suffering *is* unfair and that this is evidence of the randomness and unfairness present in the scheme of things.

For someone to come along and affirm that, as Kushner has done, strikes a responsive chord and the one who suffers may feel that his pain and anger really are understood and shared. Herein lies the word of hope even in the face of irrationality and randomness. It is a familiar word, perhaps so familiar we forget the powerful reality to which that word points, namely, that the hope in suffering is in suffering shared.

For in suffering shared the agony of loneliness is diminished and often the courage to cope is discovered. And, to repeat, acknowledging that pain and death are often the result of the tragedy of randomness may be the crucial key by which we break in the loneliness of the one who suffers. For this reason this idea may be viewed as a foundational principle for a philosophy of caring.

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But, one may object: "The traditional word that God is both just and the director of all events is the most comforting thought." But is it? Doesn't that just generate a further puzzle? Indeed, doesn't that just generate anger toward God? Isn't the situation more accurately described by Kushner in his analysis of the Job story?

When Job asks, "Why me?," what Job was seeking was someone who would acknowledge with him that what he was experiencing was dreadfully unjust. Job wanted his comforters "to tell him that he was in fact a good person, and that the things that were happening to him were terribly tragic and unfair."[20] Surely this is a word hurting people often want to hear. And again, this word just may be so crucial to breaking into the isolation and loneliness of those who grieve that we should count it as a fundamental principle of effective caring.

I have advanced two foundational ideas for a philosophy of caring: (1) that in any caring relationship a major responsibility is to be open to the other in such a way that the other may reveal his or her own genuine needs and (2) that our willingness to acknowledge with those who suffer the randomness and unfairness of certain events may be the crucial key by which we break into their loneliness.

Let me close with a brief postscript. Some of you may be saying to yourselves, "this speaker has no idea what the role of a health care professional really is. He is addressing us as if we were counselors with the time to become involved in lengthy sessions with those who suffer. But we are professionals with incredible demands made upon us and we have to use our time efficiently in utilizing scientific and technological skills in the struggle against disease."

And please hear me when I say, I know the problem of time. I experience it too. Because of the press of other responsibilities, often I have to terminate conversations with students knowing they need to stay longer and talk further. I know time is a genuine problem and I know that it is a particularly pressing problem for those of you in the health professions. But I would be remiss in talking about caring if I did not remind us of what we already know — people don't just have diseases, people are ill.

As Dr. Cassell, whom I referred to earlier, put it: "disease . . . is something an organ has; illness is something a man has.[21] And while science and technology may cure the disease and may, therefore, eliminate the illness, frequently the illness can be healed only as a result of a holistic approach toward the patient which requires more of health professionals than simply the efficient use of scientific and technological skills. This approach toward medicine views the health professional's task as caring for the whole person in the most effective way possible. It is this approach which can be served by a thoughtful philosophy of caring.

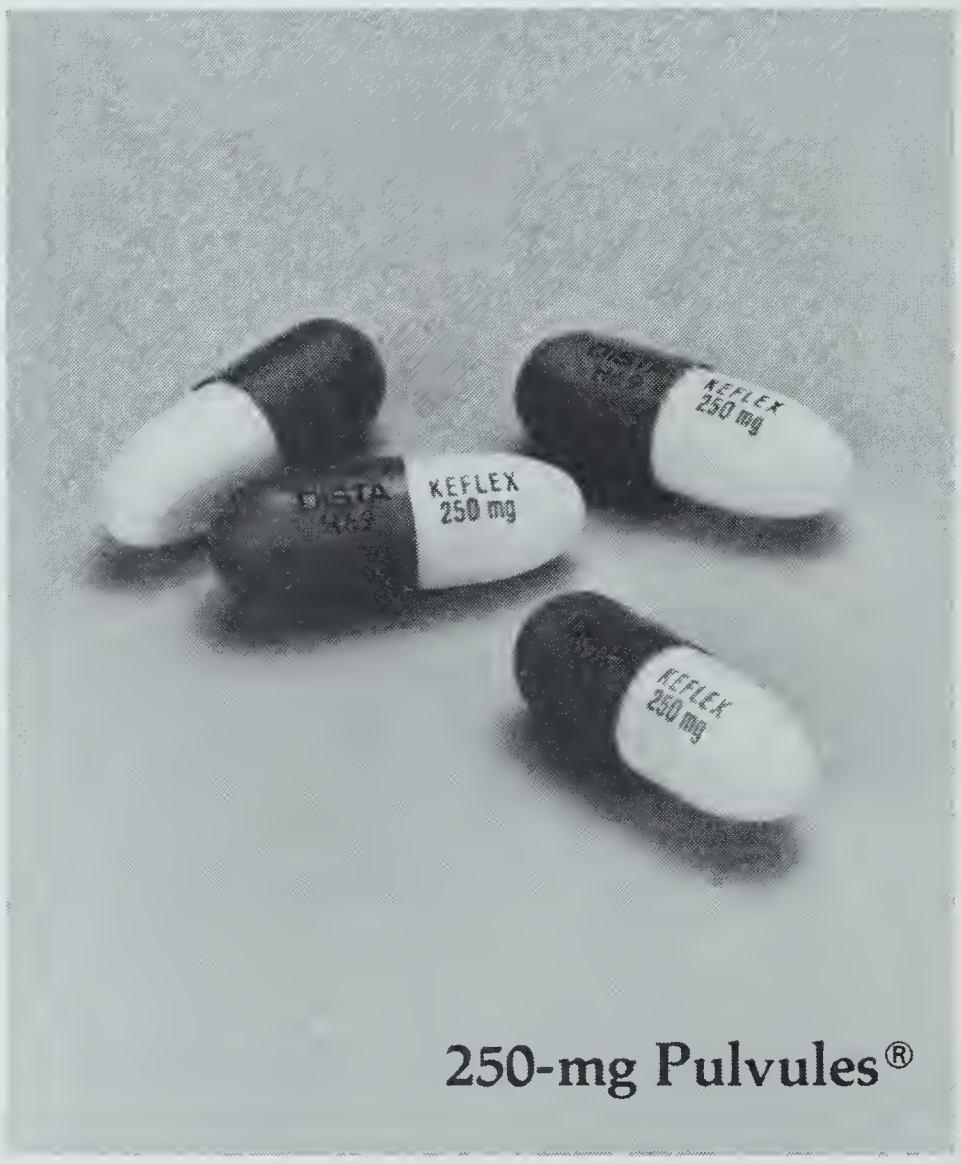
In the beginning the practice of medicine, as Cassell also points out, was by means of the spoken word. Those spoken words were the incantations of superstitious medicine men. As Western scientific medicine labored to separate itself from the superstitious word and to become rational and objective, the foundation was laid, argues Cassell, for "the modern physician who does not speak to his patients."[22] We all know that this is not the way it should be.

As a patient, my plea to you is that you will speak to me in my pain and suffering: and that as you speak you will be open to me in such a way that I will be allowed to reveal who I am and what my needs really are, and that as you speak you will acknowledge that the tragedies of life often strike randomly and unjustly and by such an acknowledgement break into my isolation and loneliness.

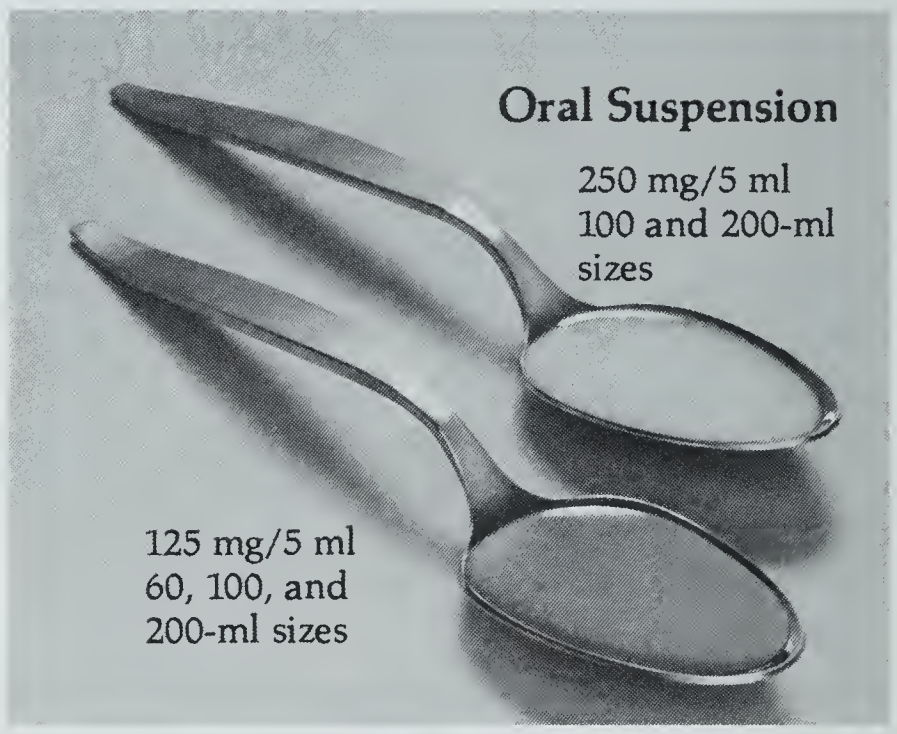
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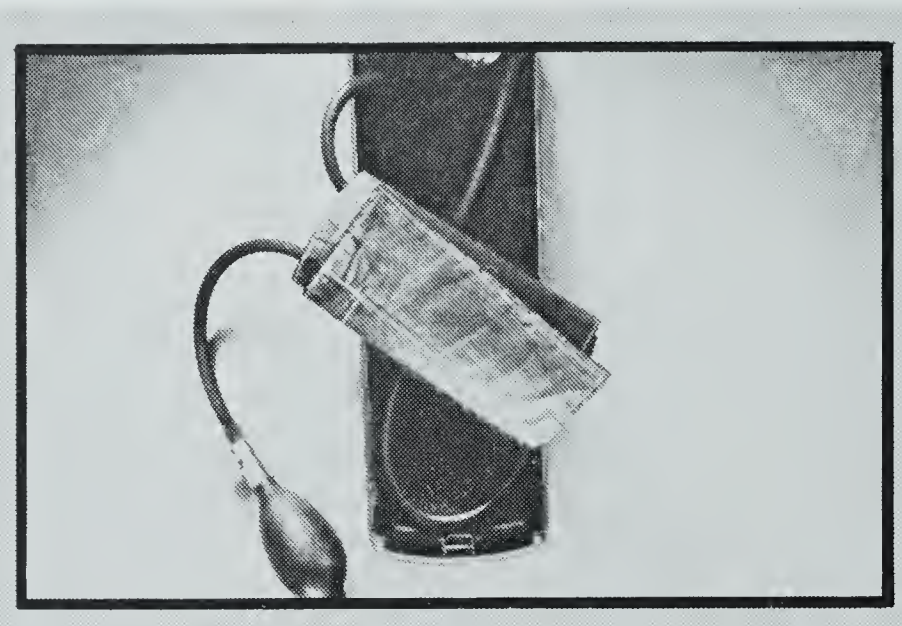
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Everyone concerned with the future of quality medical practice and care in this country must be concerned with the soaring costs and the dwindling of government funding for medical education. Now more than ever medical schools need the financial assistance of individuals.

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What is AMA-ERF? What does it provide that other sources don't? What types of programs do the funds support? Who decides how the money is distributed? These are questions which have been asked — and questions which need to be answered. But as you read on, keep one thing in mind: the bottom line is that AMA-ERF needs the support of every medical family if the nation's medical schools are to receive the help they need.

What is AMA-ERF?

AMA-ERF is a non-profit, public foundation established to help provide funds to meet the growing requirements of today's medical schools for such things as better and larger facilities, more equipment, additional faculty. It supports medical education; provides financial assistance to medical students, interns, and residents; fosters scientific and medical research; and provides funds for rural and community-oriented pilot health projects.

The work of AMA-ERF is made possible through the contributions of individuals. Approximately two-thirds of its income has come from physicians and the fund-raising efforts of the AMA Auxiliary members over the years. Contributions from foundations, pharmaceutical, and other industries and businesses; county and state medical societies, and the public have accounted for the other third of the income.

What does AMA-ERF provide that other sources don't?

A donation through AMA-ERF gives medical schools two important financial advantages: gifts are usually unrestricted and may be used by the schools where they

are needed most; and foundation covers the expenses schools might normally incur in fund raising.

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What types of programs do the funds support?
Medical schools are a principal focus of AMA-ERF support, and this is where the fund-raising efforts of the auxiliary are directed. But there are a number of other programs supported through AMA-ERF. One is the Unrestricted Fund, a flexible fund used to support special demonstration health and medical programs, research, and to provide other grants of national impact. Another is the Rock Sleyster Memorial Scholarship Program, funded completely by a bequest, which provides approximately 12 scholarships of $2,000 to deserving medical students, normally in their last years of training, who have demonstrated interest in psychiatry.

AMA-ERF also supports a Categorical Research Grants Program which awards grants from contributions designated by donors for research in specific fields. The Loan Guarantee Program has helped qualified young people finance their medical education and training when funds from other sources have not been available. More than 40,000 medical students, interns, and residents have availed themselves of the Loan Guarantee Program and more than 75,000 loans have been guaranteed since its inception in 1962. Nearly $100 million in loans have been guaranteed since that time.

Who decides how the money is distributed?
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According to letters from the deans of medical schools which have received AMA-ERF funds the money will be used for student loan programs, student research projects, summer research fellowships for students, faculty retreats, faculty recruitment, basic research projects, student aid programs, curriculum planning, student education seminars, research equipment and supplies, teaching equipment and interdepartmental organs systems course materials.

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Patty

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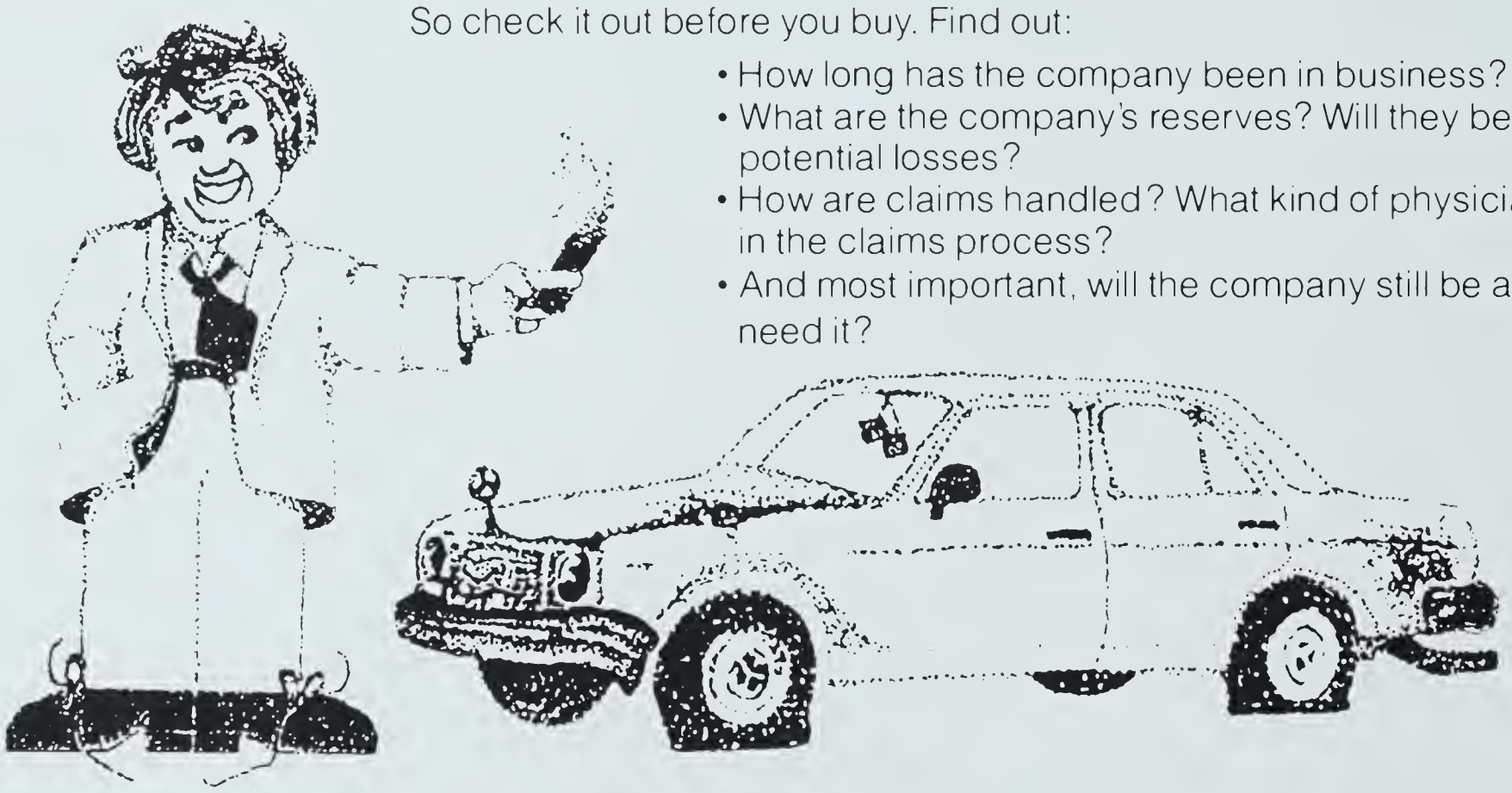
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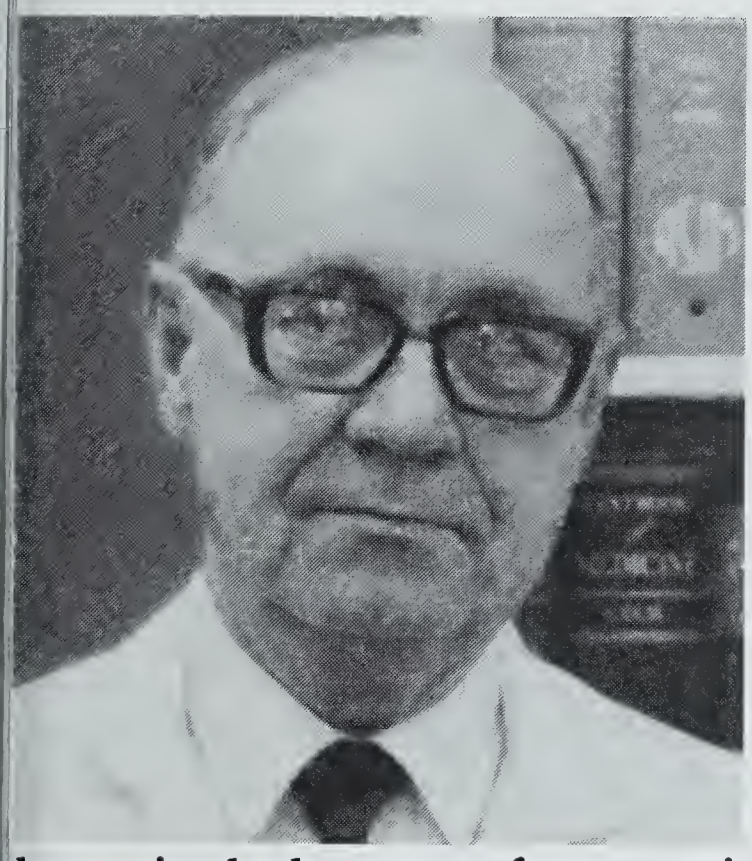


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"THE PHYSICIAN IS A DECISION MAKER, AND ALMOST EVERY DECISION HE MAKES COSTS OR SAVES MONEY."

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More and more physicians today are beginning to realize the extent of the economic influence they have, and are finding ways of holding costs down.

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More physicians today realize what a tough problem we're all faced with. They know this is a challenge for medicine. And that physicians are in the best position to deal with and solve the problem.

**PATIENT CARE Magazine—Outlook 1977, "Face-Off: Cost Containment vs. Chaos," January 1, 1977.*

Lyle CB, et al. "Practice habits in a group of eight internists," ANNALS OF INTERNAL MEDICINE 84 (May 1976), 594-601.

Schroeder SA, et al. "Use of laboratory tests and pharmaceuticals: variation among physicians and effect of cost audit on subsequent use," JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 225 (Aug. 20, 1973), 969-73.

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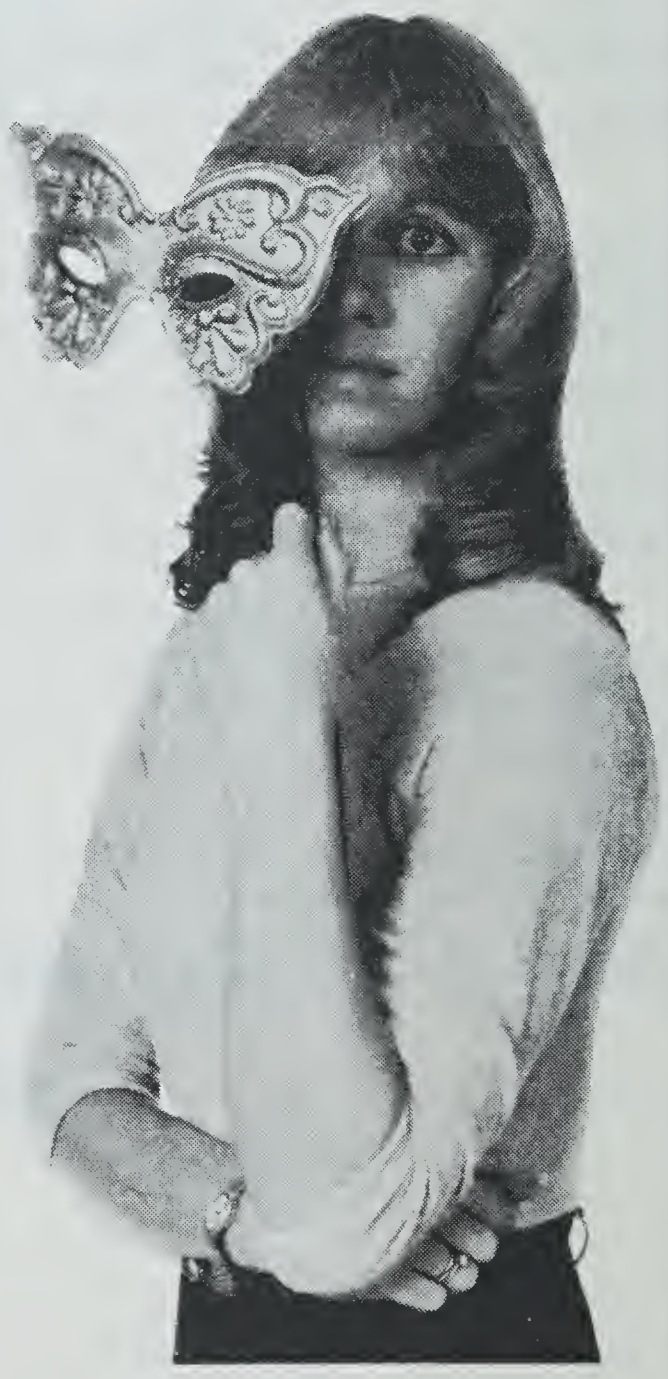
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On the Cover

F. M. Phillippi, Jr., M.D., 1972-73 MASA President, retired from his Brewton practice two years ago and returned to his ancestral roots in Wilcox County. Possum Bend, where Dr. Phillippi built the home shown on the cover, is so named for a bend in the nearby Alabama River where the marsupials are said to congregate. Designed by Mac Phillippi, Dr. Phillippi's architect son who practices in Birmingham, the Possum Bend manor was built by Bill & Lynn Chapman (Chapman Design & Construction, Camden). Story page 8.

EXECUTIVE DIRECTOR

Coats Off to the Future



S. Lon Conner
Executive Director, MASA

An old American proverb of uncertain vintage has much wisdom in it:

"Hats off to the past; coats off to the future."

Since it is that time of the year when, traditionally, we reflect on where we have been and speculate on where we are going, consider the implications of that proverbial American attitude: We are thankful for what the past has brought us, but the future is going to be hard work.

It was ever thus and ever will be. For physicians, the future, through the balance of the 1980s through the 90s and beyond, may be one of the perilous voyages in the history of the profession on this continent. The forces at work on your profession — social, economic, political — will come together with a concurrent effect never before felt by your predecessors, according to all the predictions.

A conference I attended in Chicago back in the early fall brought this home to me forcefully. One speaker after another at the National Conference on the Utilization of Health Services (co-sponsored by AMA, the American Hospital Association, and the Blue Cross/Blue Shield Association) drove home the point that the medical care environment is going to change rather drastically and unpleasantly, in some respects, for physicians in this decade.

Utilization review, heretofore employed in a limited way, is the wave of the future, speakers agreed. Much of this is spurred by the government and industry, major purchasers of health care, in their determination to contain costs and to make them projectable budget items, as they have not been in the past.

What this determination means to American physicians, according to Humphrey J. Taylor, President of the Louis Harris polling organization, is a loss of prestige, autonomy and control. He did not beat around the bush.

Government spokesmen said existing PSROs will be phased out, because they did not achieve the results expected, to be replaced by new review organizations. Prospective reimbursement, according to David Swoap, undersecretary of HHS, is seen in Washington as offering more opportunities for cost control, directly addressing the issue of structural change: "It rewards efficient hospitals and stimulates inefficient hospitals to change."

The government is now making transitional steps, Mr. Swoap said, from cost reimbursement to prospective reimbursement. The Harris polling organization, Mr. Taylor said, has found considerable public support for fairly drastic remedies to the cost of health care. The public, by a substantial majority, favors spending less for medical care, Mr. Taylor said.

"Patients used to have faith in physicians," Mr. Taylor said. "Now they are demanding more information, explanation, justification. The old mystique still lingers, but it is eroding and will continue to erode. It is likely to make life uncomfortable for physicians."

Americans are ambivalent in their attitudes toward their physicians and health care in general, Mr. Taylor said. Most are highly satisfied with the quality and availability of care, but most Americans are highly dissatisfied with the cost. And they expect their doctor, whom they trust with their health, to lead the way in keeping costs down.

Utilization review, the conferees agreed, is an idea whose time has come, however unpleasant it may be. The physician's role is to help it work, thus to insure his own future because if these last measures fail, the price of that failure may be the end of the free practice of medicine.

The past has been good to you. Hats off to it. The future, as always, looks like hard work. Specifically, physicians must toil to see that the quality of American health care, tops in the world, is not damaged by all these powerful forces coming together to restrain cost.

Best wishes for the holidays and the new year.

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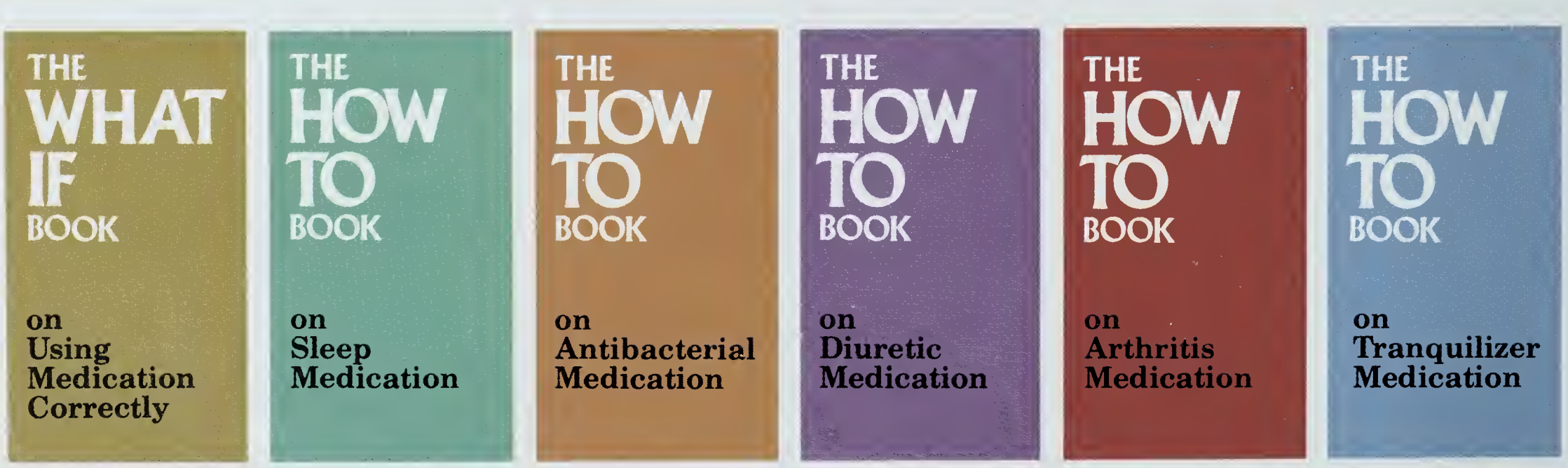
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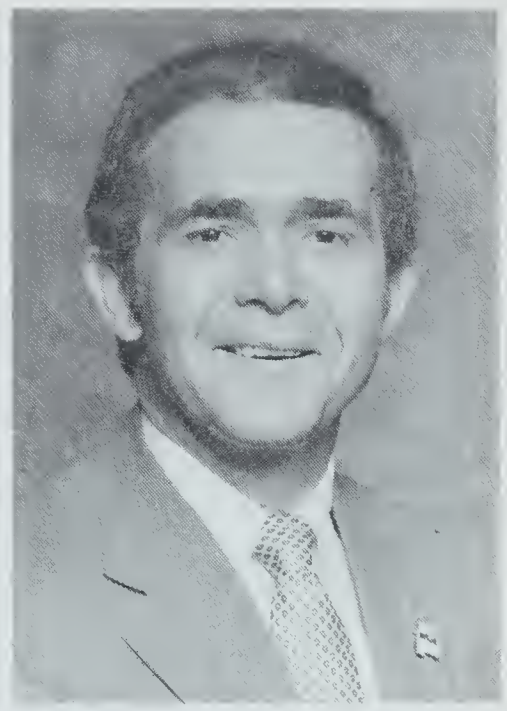
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PRESIDENT'S PAGE



Ronald E. Henderson, M.D.
President, MASA

A Minister's Probing Questions

More now than at any time in the modern age physicians seem eager to see themselves as others see them. This curiosity is not morbid, I think, but a sincere desire to discover the roots of the current unhappiness with medicine in a country that has enjoyed the benefits of that science far beyond any other in history.

Polls tell little beyond the predictable. Sometimes, a single intelligent observer, with the uncommon capacity to look at medicine up close and at a distance, is worth more than all the Gallops combined. Such is the case of the Rev. Kevin D. O'Rourke, writing in *Parameters 82*.

Father O'Rourke's eloquently written article, "Health Care: A Profession or a Business?" is compelling because he turns all of the contemporary concerns inside out. While he too is worried about the rising cost of health care, fearing many will simply be priced out of the medical marketplace, this is not his *first* concern, as he makes clear:

"My concern is not about the effort to contain rising costs of health care. Rather, by reason of the methods employed in the effort to contain health care costs, I fear that health care will be transformed from a humanitarian to an economic endeavor."

And what are the signs that health care is being transformed from a profession into a business? Father O'Rourke sees them everywhere: Where once everyone spoke of the *profession* of health care, now it is the health care *industry*. Patients are more often referred to nowadays as *consumers;* doctors, nurses and others are lumped under the commercial term *providers,* to Father O'Rourke's great distress. Worse,

"Medicine, medical procedures and practices used to be evaluated in regard to their power to alleviate pain or to heal the human person; now *cost-effectiveness* is all important and the ultimate evaluation of medical practice is whether it enables people to become, once again, *productive members of society.*"

Father O'Rourke is genuinely appalled that the profession has permitted itself to be so debased as to join the dialogue in crass economic terms.

The effect of this terminology, he argues, is to make medical care a commodity, "something akin to wheat, sand irons or popcorn, and thus the 'laws' of economics become the all-controlling influence in health care policy."

He points to the programs of the various professional associations, the American Medical Association and the College of Hospital Administrators, to underscore his point that "providers," that word he contemns, are now as obsessed as government is with legal and economic issues, to the exclusion of what used to concern them almost totally, patient care:

continued on page 25

The Squire of Possum Bend

by William H. McDonald

Frank M. Phillippi, Jr., M.D., sat in the comfortable living room of his 18-month-old home at Possum Bend, Wilcox County, and reflected on his wife's one-word description of him.

Virginia Phillippi, daughter of a Methodist minister, had carefully chosen the word a moment before — "uncompromising."

Dr. Phillippi gave it some heavy thought, 10 or 15 seconds maybe, then slowly nodded in silent agreement. It was plain to him, as to the visitor to Possum Bend, that Mrs. Phillippi had meant the label to have broader application than to Dr. Phillippi's term as MASA President a decade ago, which was the topic of discussion. And it was plain that Dr. Pilllippi nodded agreement to the general as well as the specific application of the word.

William L. Smith, M.D., MASA Secretary-Treasurer and *Journal* Editor, agrees that Dr. Phillippi was a man of fixed opinion more than 40 years ago in Tulane Medical School, whence both graduated in 1943.

Dr. Phillippi was not your ordinary medical student. He already had a doctorate, in veterinary medicine from Auburn, when his professors persuaded him to become a physician. Dr. Smith says the other medical students referred to their colleague as "Dr. Phillippi" in those lowly undergraduate days. Dr. Phillippi denies it.

You will find other contradictions and ambiguities in Dr. Phillippi's life. Mac Phillippi, the architect son who designed the Possum Bend villa and who describes it as a "high-falutin lodge," tried to talk his father into building a small, rough cabin, so that he could have all the living area he needed without actually moving from the Phillippi home in Brewton, where the Doctor had practiced some 36 years.

"I felt so sorry for my mother," Mac says, "although she is happy there now. I wanted her to keep their home in Brewton and let them have a smaller house to visit at Possum Bend."

Confronted with this statement, Dr. Phillippi rejected it out of hand: "Mac and his mother planned this house. I had nothing to do with it."

Having spent a few hours with Dr. Phillippi, this writer can guess that the true story is that Dr. Phillippi the Uncompromising wanted an adequate house as his only home after retirement, and that his wife and son finally acquiesced when negotiations over a compromise solution collapsed in the usual heap.

They collapsed just as quickly on another point about the house. Dr. Phillippi had insisted that some old 10" x 10" hand-hewn heart longleaf pine beams be incorporated into the basic structure of the house. They had seen service in two previous homes in the area and were believed to be 150 to 200 years old when he found them in Camden.

"Working in the old beams my dad found was a problem. He insisted on them, and I didn't want them. If you could have seen them when I first went out to look at them! They were mostly dirt. But he was per-



The dog in the center behind Dr. Phillippi reminds him of his 1967 National Champion, Virginia Lady. There are now five dogs in his rigorous training program.

sistent and he's hard to say no to. We did it and, doggone it, it worked. He was right.''

The long, heavy beams were installed vertically in the dining area, running through the house and resting on concrete piers underneath the floor.

Cleaned, carefully sanded and treated with polyurethane, they not only serve as load-bearing pillars but are the most striking feature in a large, formal dining area in the central section of the 3,800-square-foot building. The antiquity of the beams, with notches that once bore pegged rafters, blend handsomely with natural woods — pine and juniper — used throughout the structure.

Dr. Phillippi's inflexible insistence on the beams paid off.

Residents who served under Dr. Phillippi in Brewton have commented on his absolute control of his patients. He simply refused to accept their non-compliance. But if these qualities of stern positivism have often invited criticism, he has applied the same harsh disciplines to himself.

For some time, Dr. Phillippi had planned on retiring on his 65th birthday, in 1980. To prepare himself for the heavy work he planned after moving to Possum Bend, where he is training dogs and building a quail preserve, he began a physical reconditioning program of draconian dimensions. Some might say masochistic.

First he had a physical evaluation. A cardiologist friend, himself a runner, found abnormal ST segment shifts and PVCs on the treadmill exercise tracings. He failed the radioactive nucleotide scan for myocardial function. His cardiologist advised an angiogram. Dr. Phillippi wrote of his shaping-up experience in the *Journal* for February 1981:

''I told him that perhaps these findings might be expected in one 65 years of age who had not subjected his myocardium to any degree of stress for over 34 years, and that I had had no angina. I stated that I did not mind taking some risk, but since I did not wish to commit suicide I would consent to the angiography. . . . Much to my surprise my coronary arteries were entirely normal. My older son, a third year pathology resident [now practicing pathology in Meridian, Miss.], had come fully expecting me to submit to coronary bypass surgery.''

He began jogging, at first pooping after 200 yards. After reaching a half-mile comfortably, he put himself to the 50-yard sprint, finishing slower than he had hoped. That led to exercises to build the leg muscles. After four months, his weight had dropped from 225 to 190, his waist measurement from 42 to 32. His blood sugars and lipids were low normal. He could run two miles without discomfort in 13 to 14 minutes. ''I felt better,'' he wrote two years ago, ''than I had in 30 years.''

Thus emboldened, he decided to enter *competitive* athletics at age 65:

''I did not wish to simply compete but hoped to break records. I planned to run in all the spring events, from the 400 meter down, as well as the hurdles and high and broad jumps.''

While doing his quadriceps exercises with 50-pound weights, he developed discomfort in the lower left vastus medialis region, which soon produced swelling and pain. That benched him for three weeks. Trying the 400 meter run after insufficient reconditioning, he turned on the steam 50 yards from the tape and suffered intense pain. In agony, he still made it to the finish in 66 seconds, with 60 seconds being the world record for his age group.

He had to be helped to his car. Mrs. Phillippi, ''who had been nagging me and telling me that I was overdoing it,'' told her injured husband: ''Now you have conditioned yourself into a cripple.''

The injury sidelined his competitive career.

Later, helping six laborers with the beams in the early building of the new home, working more than any of them and still running twice daily, he developed acute sacroiliac pain lifting the heavy 10 x 10 beams.

Dismissing the pain as ligamentous, he fitted himself with a corset and continued toting barges and lifting bales. In a month, acute pain returned. The next morning, he could barely turn in bed. Pain radiated down to his ankle. The long suffering Mrs. Phillippi came to Possum Bend to fetch her fallen mate back to Brewton, where he infuriatingly refused to see a physician. After 10 days without improvement, he finally consented. His physician friend prescribed bedrest with plywood under the mattress, as Dr. Phillippi had prescribed hundreds of times in his practice. (It had never occurred to him.)

He remained in bed five weeks, but would never consider disc surgery. The back and muscle injuries were aggravated by prostatism. He almost went into urinary retention before asking for medical opinion. The prostatitis responded to treatment.

Of his whole getting-back-in-shape experience and its attendant physical miseries, a mildly chastened Dr. Phillippi concluded that the old saw is true: ''The physician who treats himself has a fool for a patient.''

Return of the Native

Dr. Phillippi's retirement to Possum Bend is a case of the return of the native. On the very spot his home now stands was his grandfather's cotton gin. Resting in the branch at the foot of the hill is the boiler used to provide the steam for the gin. Someday, Dr. Phillippi promises himself, he's going to retrieve the boiler and restore it to the hillside where it once was.

Frank M. Phillippi, Jr., was born in Charleston, S.C., where his father was an insurance actuary. After a time in Nashville when the boy was quite young, the family moved to Wilcox county in 1927, when young Frank was 12. His father had bought land there. His

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parents insisted he return to Charleston for his high school education, which he did, only to realize on graduation that he had no earthly idea what he wanted to do.

At Auburn, simply because he had always liked animals, he studied veterinary medicine, later doubling his classroom load after being persuaded by his professors that because of his scholarship he should go to medical school.

Without ever practicing veterinary medicine, he went to Tulane medical school, graduating in 1943. In his senior year, he had been approached about doing experimental surgery after graduation at Mayo Clinic. He thought about it through his internship in New Orleans, but World War II found many of the class of '43 in uniform.

Non-Combat Wounds

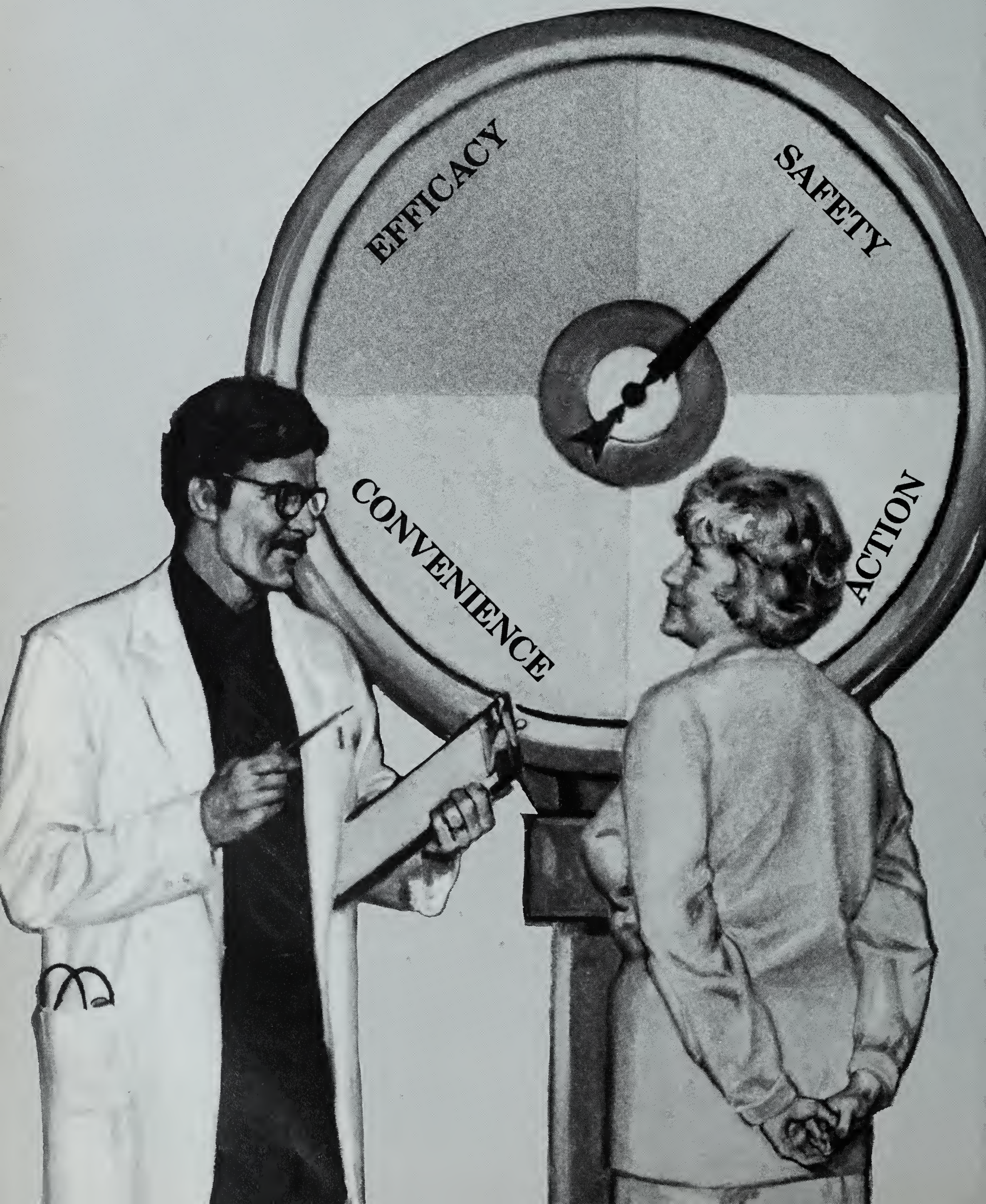
The straight-edged Phillippi trait can be seen in two "purple heart" incidents while on combat service as a medical officer in Europe. Once, his driver thought they were under attack by a German fighter plane. The driver jumped from the jeep, kicking out two of the young medical officer's front teeth. He rejected that purple heart as violating the spirit of the award for "wounded in action." He also rejected a later offer, after he had been in a real strafing attack, when he dove into a garbage dump, cutting his leg.

After the war most residencies were overcrowded. Although he was tentatively offered a residency program leading to a faculty position, he had by that time decided he did not want to live in a big city. Some relatives prevailed on him to come to Brewton for a few



The ancient vertical beam Dr. Phillippi leans on was the center of the controversy between him and his architect son. The painting of the wild turkey behind Mrs. Phillippi is the work of a local artist, who is also the proprietor of the Possum Bend general store not far away. The dogs have their own outside door. On two successive days recently they brought Mrs. Phillippi a field rat and a rabbit.

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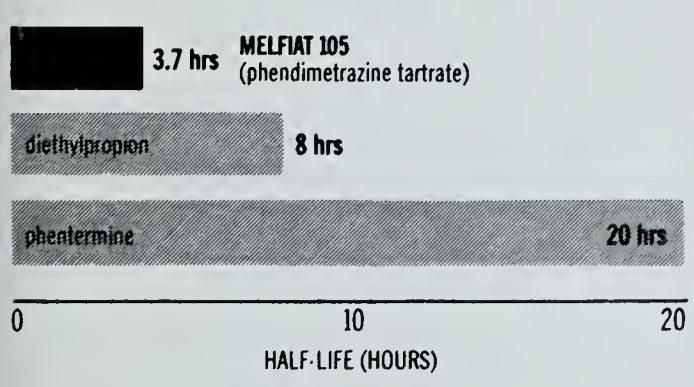


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Half-life comparison of MELFIAT 105 and other anorexiants[2]



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References: 1. Sheu YS, Ferguson JA, Cooper JR: *Evaluation of the Abuse Liability of Diethylpropion, Phendimetrazine, and Phentermine,* unclassified document ADAMHA, HHS. Office of Medical and Professional Affairs, NIDA, 1980.
2. Douglas JG, Munro JF: The role of drugs in the treatment of obesity, *Drugs* 21:362-373, 1981.

MELFIAT® 105 UNICELLES® C III
(phendimetrazine tartrate) Sustained-Release Capsules 105 mg

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MELFIAT® 105 UNICELLES® C III
(phendimetrazine tartrate) 105 mg Sustained-Release Capsules

INDICATIONS AND USAGE: Melfiat® 105 (phendimetrazine tartrate) is indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class (See CLINICAL PHARMACOLOGY) should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, symptomatic cardiovascular disease, moderate to severe hypertension, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors (hypertensive crises may result).

WARNINGS: Tolerance to the anorectic effect usually develops within a few weeks. When this occurs, the recommended dose should be discontinued. Phendimetrazine tartrate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly.

Drug Dependence: Phendimetrazine tartrate is related chemically and pharmacologically to the amphetamines. Amphetamines and related stimulant drugs have been extensively abused, and the possibility of abuse of phendimetrazine tartrate should be kept in mind when evaluating the desirability of including a drug as part of a weight-reduction program. Abuse of amphetamines and related drugs may be associated with intense psychological dependence and severe social dysfunction. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high-dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG, manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxication is psychosis, often clinically indistinguishable from schizophrenia.

USAGE IN PREGNANCY: The safety of phendimetrazine tartrate in pregnancy and lactation has not been established. Therefore, phendimetrazine tartrate should not be taken by women who are or may become pregnant.

USAGE IN CHILDREN: Phendimetrazine tartrate is not recommended for use in children under 12 years of age.

PRECAUTION: Caution is to be exercised in prescribing phendimetrazine tartrate for patients with even mild hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of phendimetrazine tartrate and the concomitant dietary regimen. Phendimetrazine tartrate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage.

ADVERSE REACTIONS: Cardiovascular: Palpitation, tachycardia, elevation of blood pressure.
Central Nervous System: Overstimulation, restlessness, dizziness, insomnia, euphoria, dysphoria, tremor, headache; rarely psychotic episodes at recommended doses.
Gastrointestinal: Dryness of the mouth, unpleasant taste, diarrhea, constipation, other gastrointestinal disturbances.
Allergic: Urticaria.
Endocrine: Impotence, changes in libido.

OVERDOSAGE: Manifestations of acute overdosage with phendimetrazine tartrate include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states.
Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma. Management of acute phendimetrazine tartrate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Acidification of the urine increases phendimetrazine tartrate excretion. Intravenous phentolamine (Regitine) has been suggested for possible acute, severe hypertension, if this complicates phendimetrazine tartrate overdosage.

DOSAGE AND ADMINISTRATION: Since Melfiat® 105 (phendimetrazine tartrate) 105 mg is a sustained-release dosage form, limit to one sustained-release capsule in the morning. Melfiat® 105 (phendimetrazine tartrate) is not recommended for use in children under 12 years of age.

HOW SUPPLIED: Each orange and clear sustained-release capsule contains 105 mg phendimetrazine tartrate in bottles of 100.

CAUTION: Federal law prohibits dispensing without prescription.

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months until he decided what to do. He practiced there as a GP for 36 years.

In all those years of practice in Brewton, he had given little thought to his life outside medicine. Except for the 1967 national championship of his hunting dog, Virginia Lady, he had almost no real consuming diversion — until the idea of returning to Possum Bend grew in his mind.

He wanted to build a quail preserve and raise bird dogs, perhaps another national champion (but more disciplined than the one he once took to Union Springs trials — an open circuit dog that bolted in pursuit of a skunk, thus forfeiting his chances to win the championship, although he pointed 13 coveys in 30 minutes, a record that still stands).

In Wilcox County, Dr. Phillippi had emerged as a leader among landowners trying to stop the night hunters and commercial poachers who descend on the area to carry off deer and other game. He is also promoting the planting of spanish oak seedlings, direct lineal descendants of the great oaks that have weathered Mobile's hurricanes for hundreds of years.

Dr. Phillippi has the backing of a leading hardwood academician in his belief that this oak is ideal for game food in Wilcox, particularly because of its succulent acorns, which deer love. The taste of the acorns has been likened to that of the chestnut or chinquapin. He now has some 10,000 seedlings.

As 1972-73 President of MASA, Dr. Phillippi was thrown into many bitter controversies, one of them being that surrounding the old Board of Trustees. He led the way to its abolition. "It amounted to two boards," he recalls, "with the Board of Censors having the final say-so."

When the news of the Tuskeegee longitudinal syphilis study broke on the front pages of the nation, President Phillippi was called for a comment by *The Washington Post*. He told *The Post,* in characteristically blunt language, that it was not a concern of MASA, but was a black program funded by the federal government.

A building program got its impetus during his administration as well as an organized continuing medical education program. His uncompromising manner, he figures, won him a lot of enemies in these controversies. [Some of Dr. Phillippi's recollections are couched in language a shade too candid for direct quotation. Suffice it to say, he believes very strongly in his own convictions, then and now, asking no quarter and giving none.]

Walking around the 3,600 acres he owns in Wilcox, Dr. Phillippi seems part of the landscape. In a very real way, he is. His mother was born in an elegant old mansion a short distance away, now called Cook Hill, and both she and his father are buried near that old 1830 home.

Dr. Phillippi has a powerful proprietary sense of the land: to make it produce its potential and to protect it, in turn, from marauders and neglect. He has, in a very real way, that same sense of predestined stewardship of the land and game that an English baron might have had about the time of Runnymede — as quick to protect it from the Crown as the peasantry.

It is his pleasure, and his duty, to leave the land better than he found it, more abundant in woods and game. He began his medical career with a disesteem for cities and a love for animals. At Possum Bend, the city is far away in time and space, and the animals give him nothing but pleasure (except when the deer eat the ornamental holly he has planted around his home).

His lanky frame in countryman's clothes, he could pass for an archetype of the American land, which possessed us, Robert Frost wrote, long before we possessed it.

Just to keep his hand in, and see some of his old patients, Dr. Phillippi makes the 75-mile trip to Brewton to run the hospital ER one weekend a month. He and Mrs. Phillippi, along with the architect son and the pathologist son, all loved Brewton. But the Squire of Possum Bend has a new home and he is plainly a very happy man — "in heaven," the architect son puts it. Somewhat lost at first, Mrs. Phillippi is now content.

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Her husband no longer drives her to distraction with his attempted Olympic feats in the seventh decade of life, and she has found new friends — scattered about, but there.

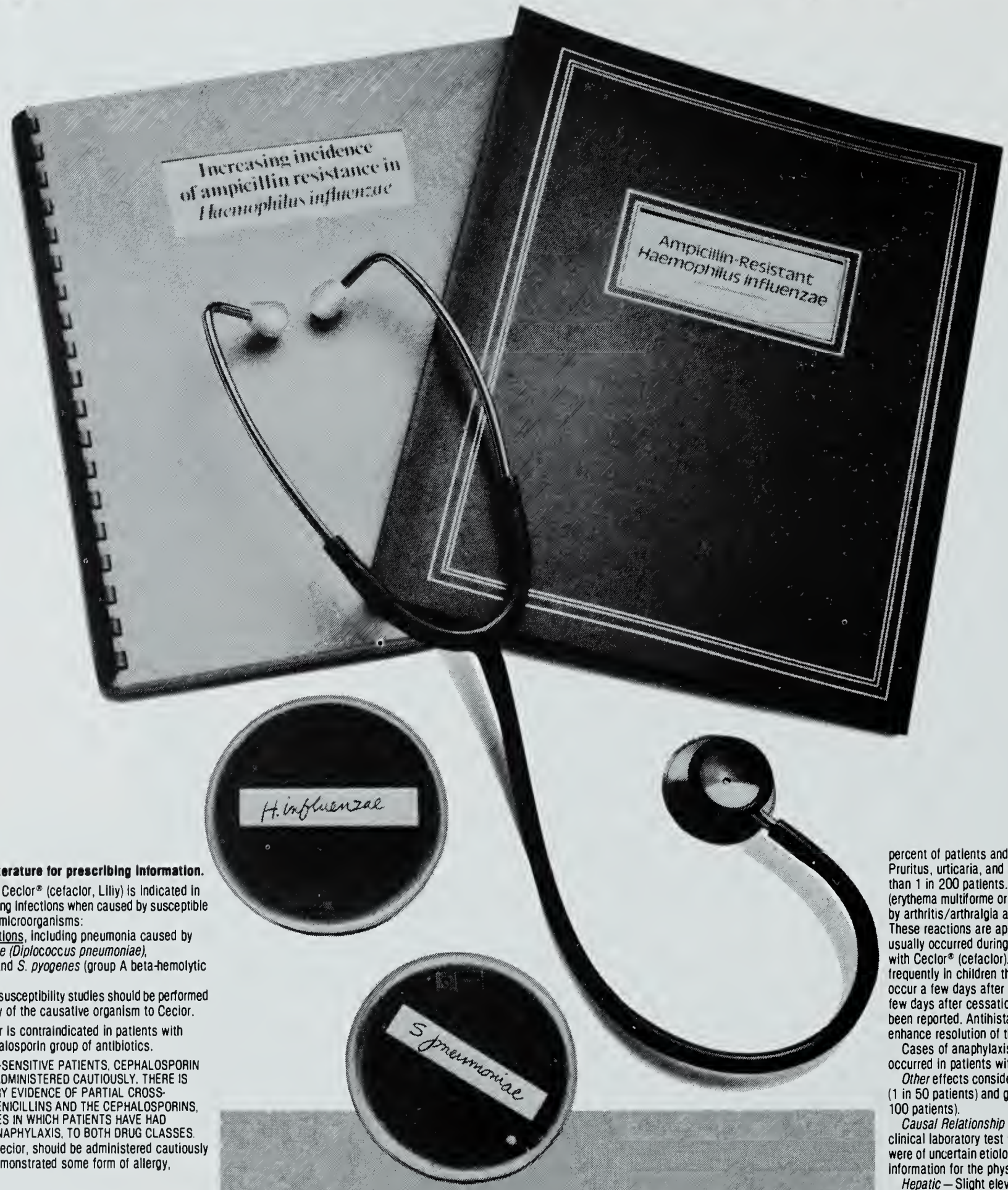
This second Christmas at Possum Bend, no more than a country mile from the Alabama River, is sure to be a happy one for the Phillippis. On those long winter evenings ahead you can be sure the Squire of Possum Bend and his lady will be ensconced before a log fire, cozily planning the busy year ahead.

It was a circuitous route — through veterinary school, medical school, and just under 40 years of practice — but Dr. Frank Phillippi has returned home.



In his spacious living room, facing a log fireplace, Dr. Phillippi can spend his long winter evenings planning next year's work on his quail preserve and other projects.

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Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

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Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae,* and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established.

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below:

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100261R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae.*[8]

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

Lilly

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Hospital Reimbursement

Peter W. Morris, M.D.
Vice President, MASA

As the Jefferson County Medical Society initiated its campaign to control the cost of health care, hospital reimbursement was identified as one factor to be examined. During the course of the subsequent year, the JCMS Hospital Reimbursement Committee looked at hospital reimbursement methodologies and their impact on the cost of health care. The Committee's observations are as follows:

- Most physicians do not understand how hospitals are paid for their services;
- Traditional payment mechanisms do not promote efficiency in area hospitals;
- Physicians should participate in reimbursement policymaking, both in their own hospitals and at the governmental level.

As a result of these observations, this article has been prepared as a general guide for physicians in understanding the complexities of hospital reimbursement. It is important to note that the material presented here provides only a broad overview of the reimbursement process. Each of the state's 130 community hospitals is reimbursed according to its own specific situation.

Cost and Charges

There are two frameworks upon which reimbursement methodologies are built — cost and charges. Some payment mechanisms are cost-based, some are charge-based, while others are some combination of cost and charges. The proportion of income a hospital receives under a given reimbursement method varies with its patient mix, which determines the source of income. Since reimbursement methods vary from state to state (especially for Blue Cross), this article is applicable only for the state of Alabama.

Reimbursement Based on Cost

As illustrated in Table I, most hospitalizations in Alabama are paid for on a reasonable cost basis (subject to charges limitation). This includes Medicare and Medicaid hospitalizations and most Blue Cross sponsored inpatients.

Although Blue Cross, Medicare, and Medicaid reimburse on the basis of reasonable hospital costs, there are significant differences in their programs so that the actual reimbursement is not the same. The following is

Source of Payment	*Basis for Payment*	*Percentage of Hospital Business*
Medicare	**Cost ***	**35- 50**
Medicaid	**Cost ***	**1- 15**
Commercial insurance:		
Blue Cross	**Cost plus 7%-11%**	**40- 20**
Aetna	**Charges**	**15- 3**
Mutual of Omaha	**Charges**	
Travelers	**Charges**	
Others	**Charges**	
Private pay	**Charges**	**7- 2**
Indigent/bad debt		**2- 10**
		100 100

*** Limited to lower of cost or charges.**

an explanation of the reimbursement mechanisms employed by each source of payment.

I. Blue Cross

Blue Cross/Blue Shield of Alabama negotiates a contract with each participating hospital. The specifics of the contract vary with the different hospitals and with the method of reimbursement negotiated by each hospital.

Most hospitals in Alabama are reimbursed by Blue Cross through a plan referred to as *cost plus*. This plan provides reimbursement for the hospital's *billed charges* which are *not to exceed* the hospital's *cost* for the covered services *plus* a negotiated fee. This negotiated fee ranges from 7% to 11%-7% Basic, plus 2% to compensate for bad debts and charity, plus 2% for agreeing to perform concurrent utilization review of Blue Cross inpatients.

This reimbursement plan accommodates the concept of billed charges but it also establishes a *maximum* limit through the *use of the reasonable cost-based approach*. The mechanics of this method are further explained below:

- When a patient is discharged from the hospital, a bill is rendered for the hospital's charges. The patient is responsible for any deductible (usually $50-$100) and all services not covered by the subscriber's Blue Cross contract. Blue Cross is responsible for the remainder of the bill; that is, Blue Cross ''covers'' the remaining amount, primarily through the cost plus basis. However, in most instances, Blue Cross does not actually pay the hospital the remaining amount of the bill.
- Each year, the total allowable costs for covered inpatient services (as determined by the Blue Cross Participating Hospital Contract and Manual on Reimbursement) for each member hospital are determined. This amount is divided by the total number of hospital days for all patients (Blue Cross, Medicaid, Commercially insured, etc.) to determine the average daily expense or the *daily per diem rate*.
- The hospital is reimbursed by Blue Cross at *weekly intervals* during the year. The amount of reimbursement is derived by multiplying the per diem rate by the total number of hospital days from Blue Cross claims adjudicated that week. (As can be discerned from the preceding, the actual charge to the patient in the form of his/her hospital bill bears little, if any, relation to what the hospital actually receives from Blue Cross, except that total payment is ultimately limited to the lower of covered charges or cost plus.)
- At the end of each member hospital's Blue Cross fiscal year, an Annual Blue Cross Cost Study is prepared (by either the hospital or by Blue Cross) which identifies the actual total allowable costs for the services provided for inpatients. This is broken down by hospital department such as lab, x-ray, pharmacy, etc.
- If the hospital or the hospital's agent prepares the Blue Cross Cost Study, Blue Cross may conduct an audit to verify its reasonableness. This study is primarily concerned with making sure that Blue Cross does not pay for services that it does not cover, such as TV sets in patients' rooms, parking lots, cafeterias, etc. However, it usually does not question the costs of the services it covers. Such items as the number of lab employees, the number of administrators, the salaries paid to various employees, the necessity of various equipment that has been purchased, etc., are not questioned except in unusual circumstances. The total cost for each department in the hospital is determined, and Blue Cross then reimburses the percentage of the costs used by Blue Cross patients during the year. For example, if the total annual expenses for a lab are $1,000,000 and the percentage of hospital days used by Blue Cross patients during the year is 50%, then Blue Cross will reimburse $500,000 of the total annual lab expenses. The actual charge for any individual lab procedure is irrelevant in this method of reimbursement except as mentioned below. This procedure is used to determine the expenses of each department for which Blue Cross is responsible.
- The total amount of allowed expenses for each hospital department for Blue Cross patients is then determined and compared to the total interim weekly payments that have been made to the hospital. This comparison results in what is known as the *retroactive adjustment*. If the total Blue Cross interim payments do not cover the total allowed (cost plus 7-11%), Blue Cross will pay the hospital an adjustment to cover the difference. If the total interim payment exceeds the total allowed, the hospital will pay Blue Cross an adjustment to cover the difference.
- Rarely will the total billed charges for Blue Cross patients be less than the total of cost plus (7-11%) of the allowable expenses. However, should this occur, the hospital will make an adjustment to Blue Cross. This is in keeping with Blue Cross policy that, in a given year, the total payment by Blue Cross to a hospital will never exceed the total billed charges for Blue Cross patients by a hospital. In cases such as this, the charges billed to the patient do affect the reimbursement that a hospital will receive.
- On the average, billed charges will be about 20% greater than the actual costs. However, when the ''plus'' factor (7-11%) is added to the costs, the differential between billed charges and ''cost-plus'' reimbursement is less than 20%.

II. Medicare

Medicare has in the past generally reimbursed hospitals on an allowable cost basis, subject to the lower of cost or charges. This was radically changed by the Tax Equity & Fiscal Responsibility Act of 1982 and by lengthy and complex regulations published in the *Federal Register* for Oct. 1, 1982. A major change is

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Comprehensive decongesting, antihistaminic and anti-secretory reliever for patients with nasal, sinus and other upper respiratory irritation.

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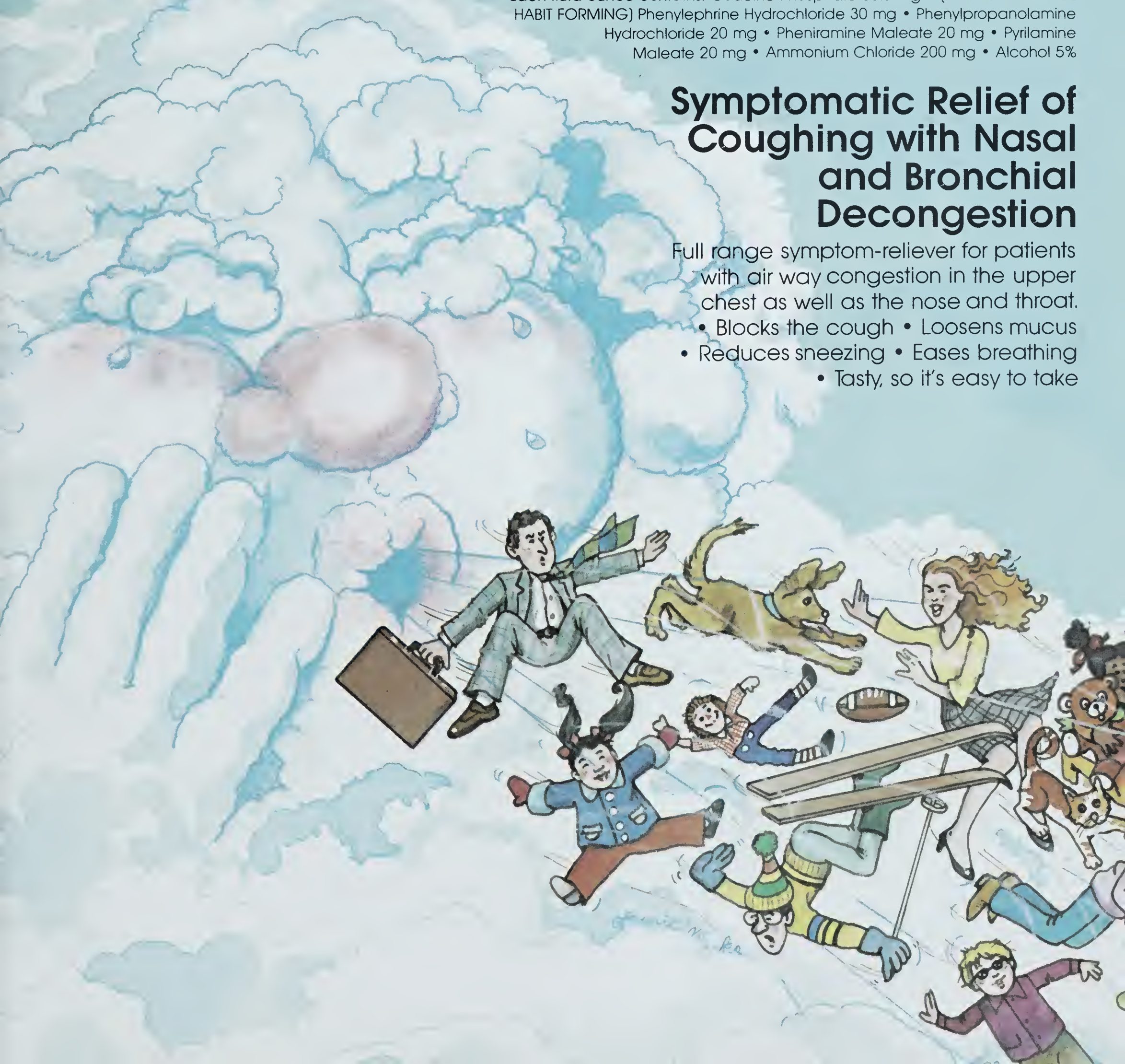
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Symptomatic Relief of Coughing with Nasal and Bronchial Decongestion

Full range symptom-reliever for patients with air way congestion in the upper chest as well as the nose and throat.

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Tablets

DESCRIPTION

Each prolonged action tablet contains:

Phenylephrine Hydrochloride	25 mg
Phenylpropanolamine Hydrochloride	50 mg
Chlorpheniramine Maleate	8 mg
Hyoscyamine Sulfate	0.19 mg
Atropine Sulfate	0.04 mg
Scopolamine Hydrobromide	0.01 mg

Ru-Tuss Tablets act continuously for 10 to 12 hours.

Ru-Tuss Tablets are an oral antihistaminic, nasal decongestant and anti-secretory preparation.

INDICATIONS AND USAGE Ru-Tuss Tablets provide relief of the symptoms resulting from irritation of sinus, nasal and upper respiratory tract tissues. Phenylephrine and phenylpropanolamine combine to exert a vasoconstrictive and decongestive action while chlorpheniramine maleate decreases the symptoms of watering eyes, post nasal drip and sneezing which may be associated with an allergic-like response. The belladonna alkaloids, hyoscyamine, atropine and scopolamine further augment the anti-secretory activity of Ru-Tuss Tablets.

CONTRAINDICATIONS Hypersensitivity to antihistamines or sympathomimetics. Ru-Tuss Tablets are contraindicated in children under 12 years of age and in patients with glaucoma, bronchial asthma and women who are pregnant. Concomitant use of MAO inhibitors is contraindicated.

WARNINGS Ru-Tuss Tablets may cause drowsiness. Patients should be warned of the possible additive effects caused by taking antihistamines with alcohol, hypnotics, sedatives or tranquilizers.

PRECAUTIONS Ru-Tuss Tablets contain belladonna alkaloids, and must be administered with care to those patients with glaucoma, or urinary bladder neck obstruction. Caution should be exercised when Ru-Tuss Tablets are given to patients with hypertension, cardiac or peripheral vascular disease or hyperthyroidism. Patients should avoid driving a motor vehicle or operating dangerous machinery (See Warnings).

OVERDOSAGE Since the action of sustained release products may continue for as long as 12 hours, treatment of overdoses directed at reversing the effects of the drug and supporting the patient should be maintained for at least that length of time. Saline cathartics are useful for hastening evacuation of unreleased medication. In children and infants, antihistamine overdosage may produce convulsions and death.

ADVERSE REACTIONS Hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia may occur. Other adverse reactions to Ru-Tuss Tablets may be drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension/hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerotomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, dizziness and insomnia. Large overdoses may cause tachypnea, delirium, fever, stupor, coma and respiratory failure.

DOSAGE AND ADMINISTRATION Adults and children over 12 years of age, one tablet morning and evening. Not recommended for children under 12 years of age. Tablets are to be swallowed whole.

HOW SUPPLIED:

Bottles of 100 Tablets	NDC 0524-0058-01
Bottles of 500 Tablets	NDC 0524-0058-05

Federal law prohibits dispensing without prescription.

DISTRIBUTED BY:
Boots Pharmaceuticals, Inc.
Shreveport, Louisiana 71106

MANUFACTURED BY:
Vitarine Company, Inc.
Springfield Gardens, New York 11413

RU-TUSS®

Expectorant

DESCRIPTION

Each fluid ounce of Ru-Tuss Expectorant contains:

Codeine Phosphate	65.8 mg
(WARNING: MAY BE HABIT FORMING)	
Phenylephrine Hydrochloride	30 mg
Phenylpropanolamine Hydrochloride	20 mg
Pheniramine Maleate	20 mg
Pyrilamine Maleate	20 mg
Ammonium Chloride	200 mg
Alcohol	5%

Ru-Tuss Expectorant is an oral antitussive, antihistaminic, nasal decongestant and expectorant preparation.

INDICATIONS AND USAGE Ru-Tuss Expectorant is indicated for symptomatic relief of upper respiratory congestion associated with pharyngitis, tracheitis, bronchitis, and allergic rhinitis. Also, for the temporary relief of symptoms associated with hay fever, allergies, nasal congestion and cough due to the common cold.

CONTRAINDICATIONS Hypersensitivity to antihistamines. Concomitant use of an antihypertensive or antidepressant drug containing a monoamine oxidase inhibitor is contraindicated.

Ru-Tuss Expectorant is contraindicated in patients with glaucoma, bronchial asthma and in women who are pregnant.

WARNINGS Ru-Tuss Expectorant contains codeine phosphate, therefore, the patient should be warned of the potential that this drug may be habit forming. Ru-Tuss Expectorant may cause drowsiness. Patients should be warned of the possible additive effect caused by taking antihistamines with alcohol, hypnotics, sedatives and tranquilizers.

PRECAUTIONS Patients taking Ru-Tuss Expectorant should avoid driving a motor vehicle or operating dangerous machinery (See Warnings). Caution should be taken with patients having hypertension, diabetes, hyperthyroidism and cardiovascular disease.

Caution should also be used in patients with pulmonary, hepatic or renal insufficiency.

ADVERSE REACTIONS Ru-Tuss Expectorant may cause drowsiness, lassitude, giddiness, dryness of mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension/hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerostomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, and insomnia. Overdoses may cause restlessness, excitation, delirium, tremors, euphoria, metabolic acidosis, stupor, tachycardia and even convulsions.

DOSAGE AND ADMINISTRATION Adults: 1 or 2 teaspoonfuls, orally, every 4 hours, not to exceed 10 teaspoonfuls in any 24-hour period.

Children 6 to 12 years of age: ½ the adult dose, not to exceed 6 teaspoonfuls in any 24-hour period. Children 2 to 6 years of age: ½ teaspoonful every 4 hours, not no exceed 3 teaspoonfuls in any 24-hour period. Children under 2 years of age: Use as directed by a physician.

HOW SUPPLIED: (16 fl. oz.)

Pint Bottles	NDC 0524-1010-16

Federal law prohibits dispensing without prescription.

MANUFACTURED AND DISTRIBUTED BY:
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Shreveport, Louisiana 71106

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Pioneers in medicine for the family

that hospital reimbursement is to be based on a cost-per-case method, using Diagnostic Related Groups (DRGs). The intent is to force hospitals to monitor costs on a per-case basis as distinguished from the traditionally used per diem mechanism. The complexity of the new law and the regulations, which were still being interpreted at this writing, precludes any detailed analysis here.

III. Medicaid

Medicaid reimburses similarly to Medicare. However, Medicaid may cover some services (such as nursery and delivery room) which Medicare does not cover.

Reimbursement Based on Charges

I. By Insurance Companies

Insurance companies such as Aetna, Mutual of Omaha, Travelers, and others reimburse hospitals on the basis of billed charges; that is, actual charges billed to the patient for hospital services rendered. Charges are designated by hospital management for each item of service.

There are two categories of charges: (1) the basic bed rate, which includes room, food service, nursing service, housestaff, and much of the building costs such as housekeeping and maintenance; and (2) ancillary charges which are for services ordered by the patient's physician such as drugs, lab tests, operating room, physical therapy, etc.

As long as charges are reasonable and within the range of charges of other hospitals for similar services, they are generally not questioned by insurance companies. However, charges which seem to be excessive can be challenged by insurance companies and may result in a negotiated payment.

There may be some services which are not covered by the particular company (such as private room, telephone, TV set, etc.) which must be paid by the patient.

Under the billed charges system of reimbursement, the actual charge for each service is paid. Generally, hospital charges will be about 20% greater than costs. This is not all profit because all hospitals have some unreimbursed expenses such as bad debt and charity care.

III. Private Pay

Patients who do not have insurance and who do not qualify for free care are rendered bills based on charges and are responsible for full payment of the bill. If the patient feels that the charges are excessive, it is his/her responsibility to negotiate the dispute with the proper hospital authorities. It is also the patient's responsibility to arrange for terms of payment of the bill. ⊡

President's Page

continued from page 7

"Recall that professional associations or societies were founded to improve the standards of patient care, whether this care was offered inside or outside of health care facilities."

Then he asks a question he believes we will find painful to contemplate:

"Is the emphasis of these organizations today upon protection of the patient or upon self-protection of the persons and institutions who make up the association?

"Granted, professionals and institutions offering health care need to be concerned about their own welfare. But this concern should be ordered explicitly to improve patient care. Has the concentration upon economic issues brought about a confusion of goals in professional organizations?"

The individual physician has also been affected, according to Father O'Rourke:

"The transformation of medicine is signed by the fact that some health care professionals even use wealth as a measuring device of their professional accomplishments; the amount of money they earn, the number of homes they possess or how many successful real estate investments they make, becoming for some the criteria that give them worth and meaning. How far removed these criteria are from those associated with medicine as a profession."

He goes on at some length to give full dimension to his dismay, which is considerable, but perhaps it can be seen from this brief sample of his challenging essay that Father O'Rourke is not your ordinary naysayer. He holds high the ideals of medicine and asks all of us if, in joining the national economic debate over cost, we have not failed our long heritage.

Wisdom, compassion and human concern have become devalued, he argues, as forces in society have pushed the practice of medicine toward being a business and away from the time-honored position of a profession.

As we approach a very important religious holiday in this country, the leaders of our professional associations as well as individual physicians need to re-evaluate their goals, objectives and value judgments. Have our associations reacted to external forces so that basic reasons for existing have been forgotten? Do you and I as physicians measure our self worth more by the amount on the bottom line than by the pain and suffering we relieve or the number of times we meet the individual needs of our patients?

I think all of us owe such informed criticisms as Father O'Rourke's much soul-searching. Do we run the risk, as he suggests, of winning the battles but losing the war?



The Technique of External Reconstruction of Nasal Deformities

Julius Hicks, M.D., F.A.C.S.*
Kim Schmitt, M.D.†
Mr. Adam Schmitt‡

We will discuss the external surgical approach to the reconstruction of nasal deformities. After reviewing the history of the operation and the pertinent anatomy, we will explain the advantages of an external approach and the indications for this surgical technique. We will highlight the details of the procedure and finally discuss two illustrative cases.

Introduction

There are two basic goals of rhinoplasty: aesthetic improvement and functional improvement. While the standard septorhinoplasty procedure achieves these goals, the final results can sometimes be unpredictable. Over the past forty-five years there has been increasing interest in an external surgical technique for the reconstruction of nasal deformities. The conventional septorhinoplasty obtains access to the nasal skeleton via intranasal incisions exclusively. The external procedure, however, adds a single inconspicuous skin incision at the mid-columella level. This maneuver allows elevation of the dorsal nasal skin, exposing the entire nasal skeleton to direct vision. This wide exposure offers several advantages and thus leads to more predictable results without compromising cosmesis.

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‡ Research Fellow, University of Alabama Hospitals and Clinics, Birmingham, Alabama.

History

Circa 600 B.C. Sushruta Sombita performed rhinoplasties by an external approach.[1] In 1934 Rethi of Budapest, Hungary, reported use of an external approach for nasal tip surgery.[2] Sercer of Zagreb, Yugoslavia, uncovered the cartilaginous and bony pyramid using an external procedure in 1962.[3] Four years later, Padovan, also of Zagreb, described his external technique for septoplasty.[4] Goodman of Canada subsequently developed and broadened the indications for the operation during the decade of the 1970's.[5]

Anatomy

The nose is the most prominent aesthetic structure of the midface. Its strength has often been mentioned in songs and fables. Its skeletal support derives from the paired nasal bones, upper lateral cartilages, and lower lateral cartilages (Fig. 1). The cavity formed by these paired structures is divided into two parts by a nasal septum. Over 80% of this septum is formed by the quadrilateral cartilage and crest of the maxilla, caudally, and the perpendicular plate of the ethmoid and the vomer bone, posteriorly (Fig. 2).

Advantages and Indications

After careful patient selection and detailed preoperative analysis, the surgeon determines the steps needed to achieve the desired outcome. The external approach offers him/her several advantages: (1) wide exposure of the surgical field; (2) direct visualization of the nasal

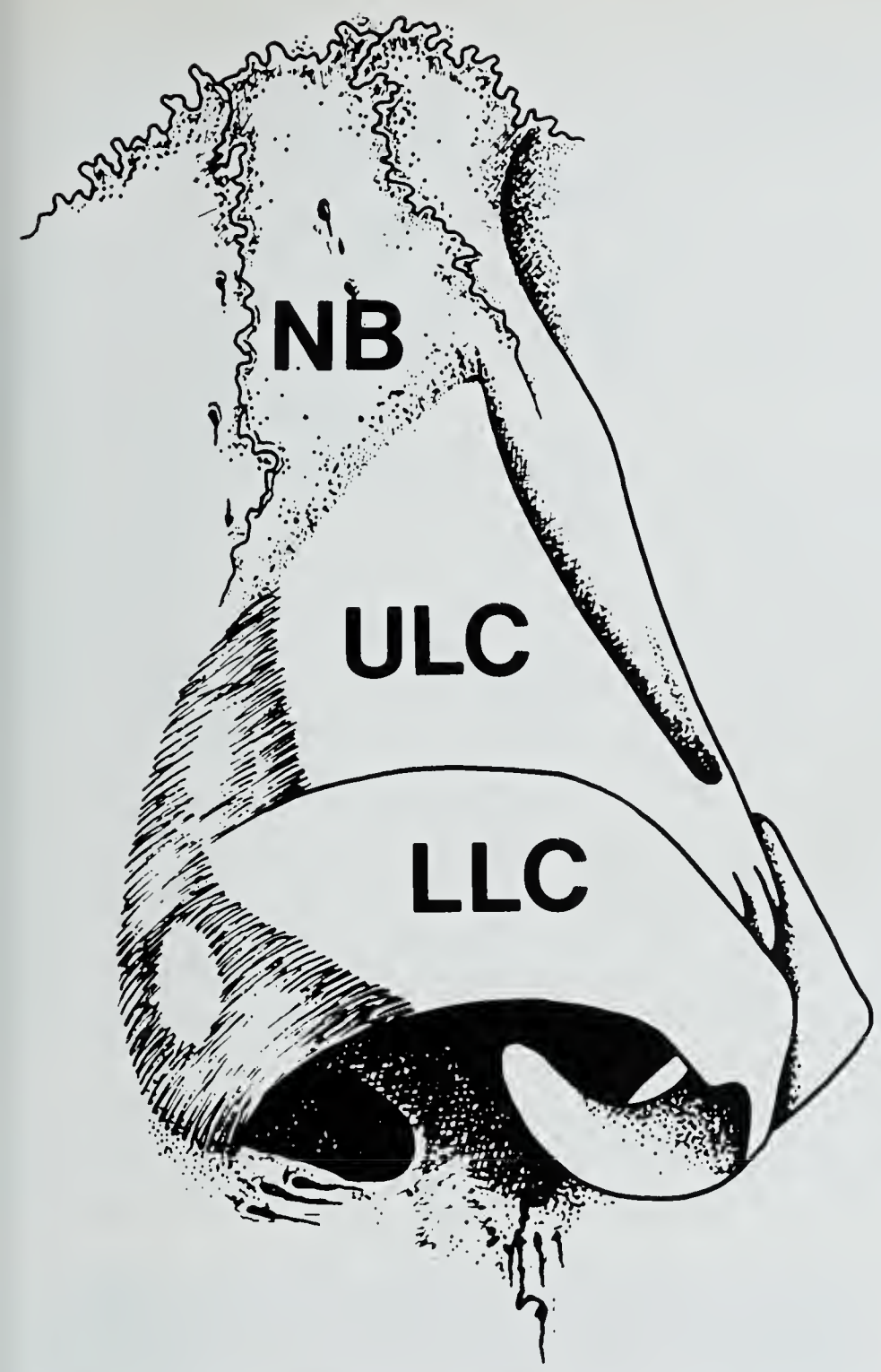


Figure 1. These structures support the outside of the nose: NB-nasal bones; UL-upper lateral cartilages; LL-lower lateral cartilages.

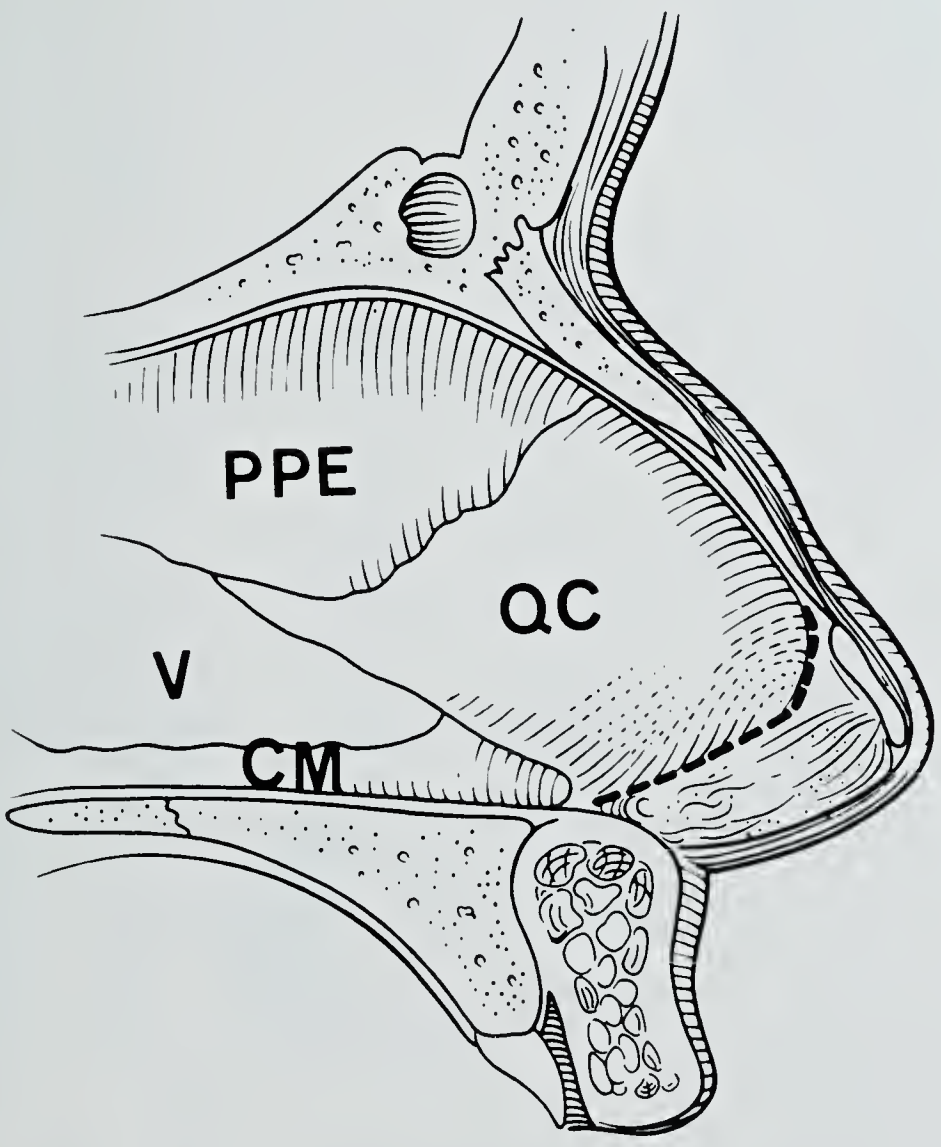


Figure 2. Important bone and cartilage structures of the septum are these: AC-quadrilateral cartilage; C of C-crest of maxilla; PPE-perpendicular plate of the ethmoid; V-vomer bone.



Figure 3. These incisions are made to begin the skin flap elevation.

structures; (3) easier and more accurate diagnosis of the deformities; (4) pinpoint control of bleeding by electrocautery. While some surgeons now use the external technique exclusively, its main indications are: (1) congenital deformities; (2) major septal deformities; (3)

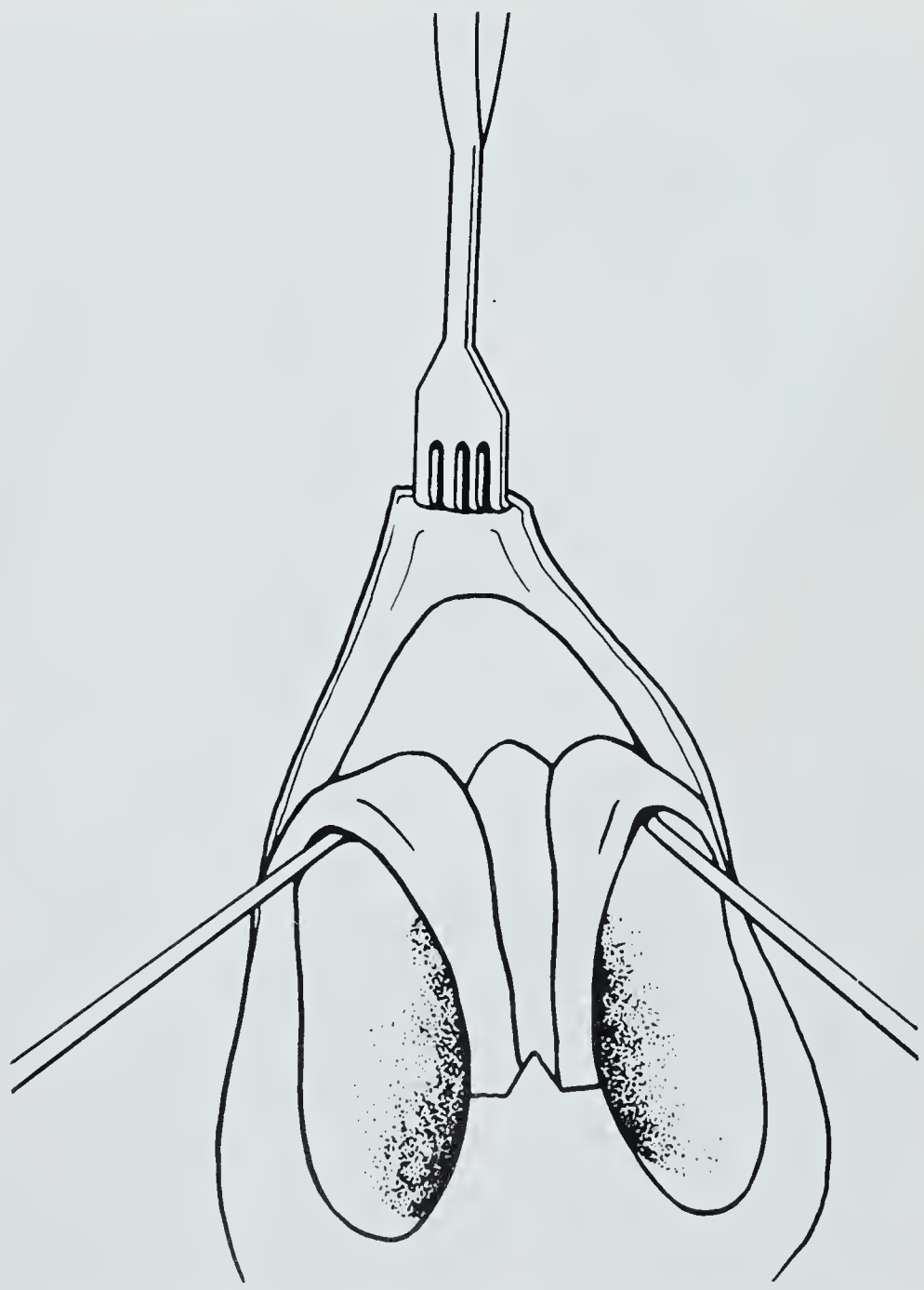


Figure 4. This illustration shows the skin flap lifted up to expose the supporting structures of the external nose.

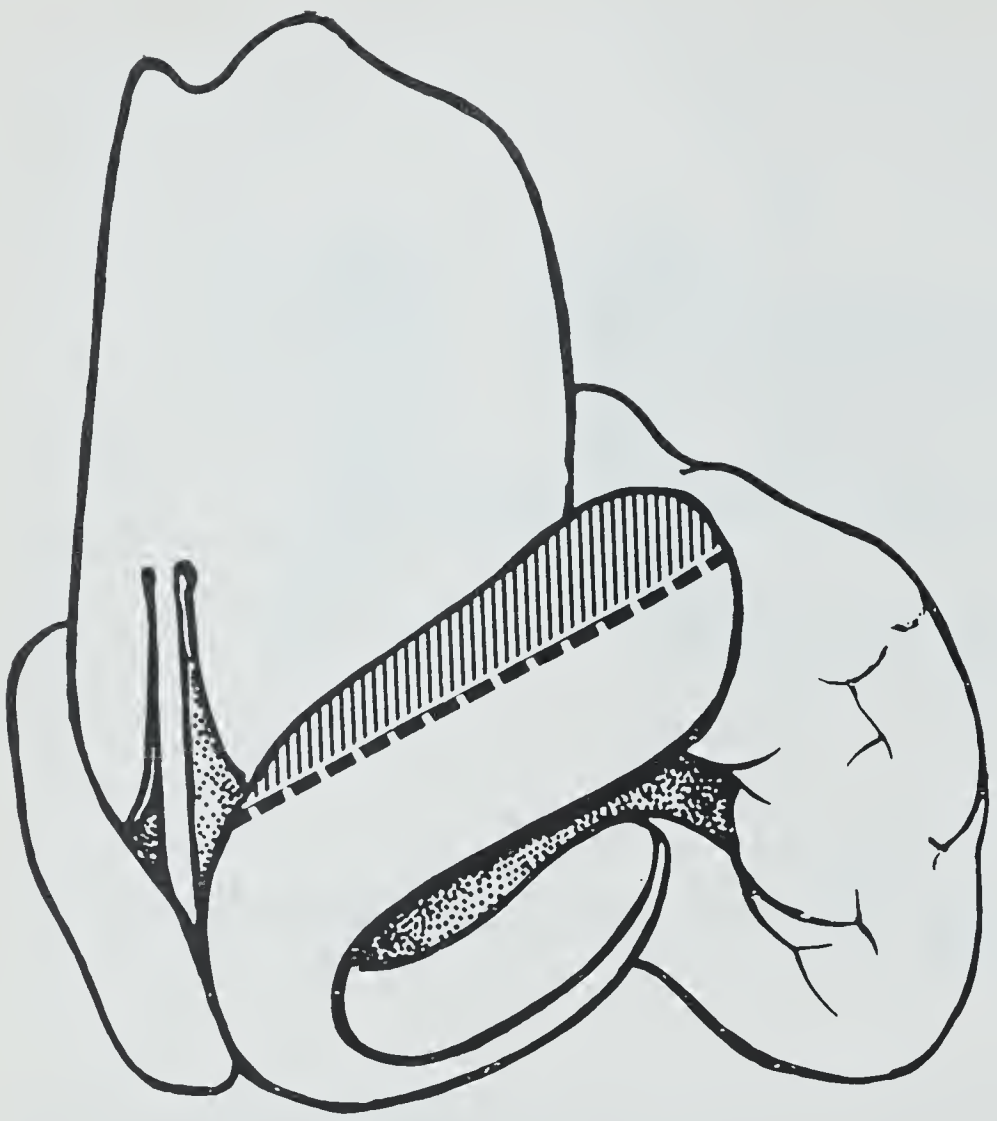


Figure 5. The cephalic portion removal of the lower lateral cartilages is easily done with the external approach.

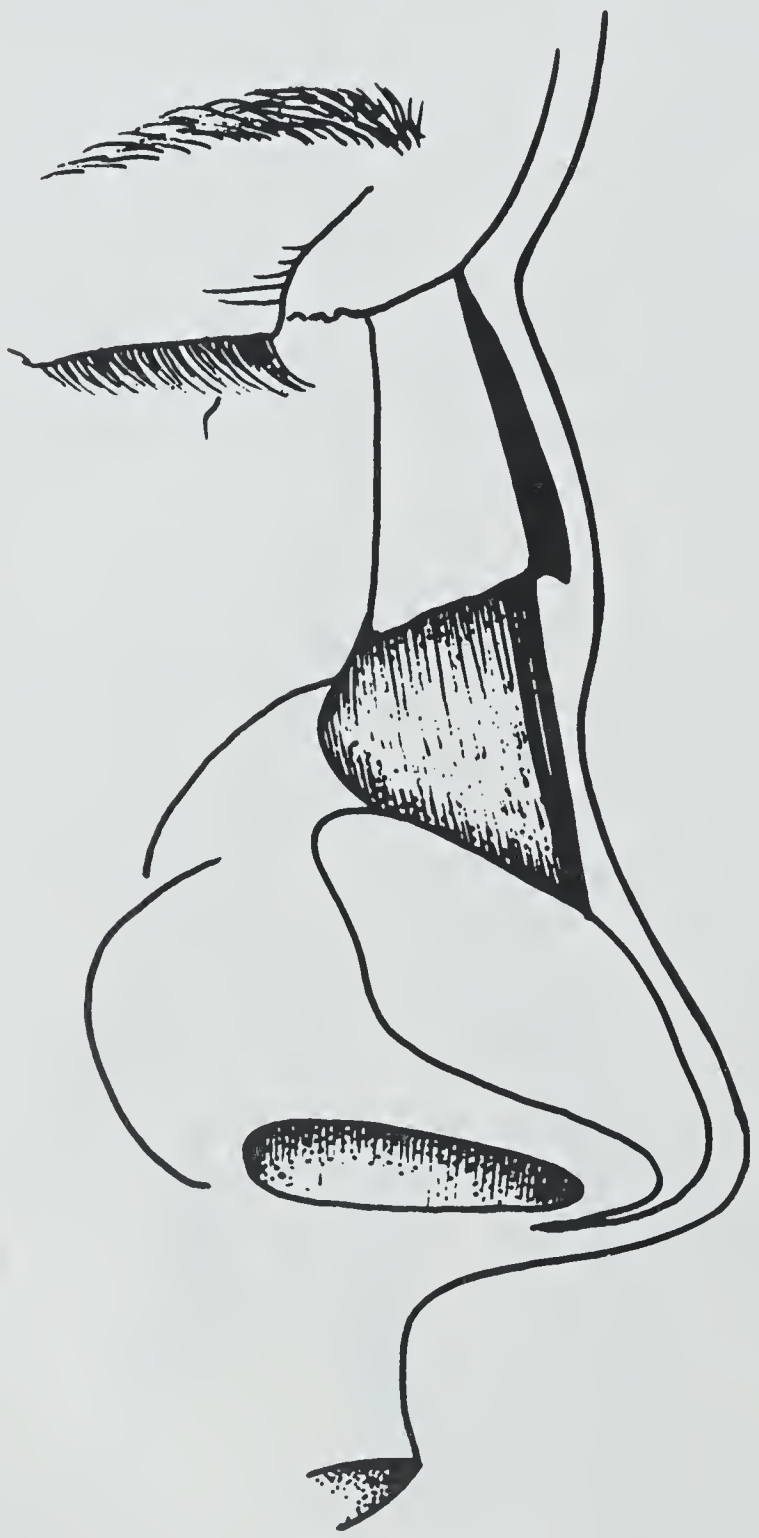


Figure 6. Drawing shows removal of the cartilaginous hump; the bony hump to be removed remains.

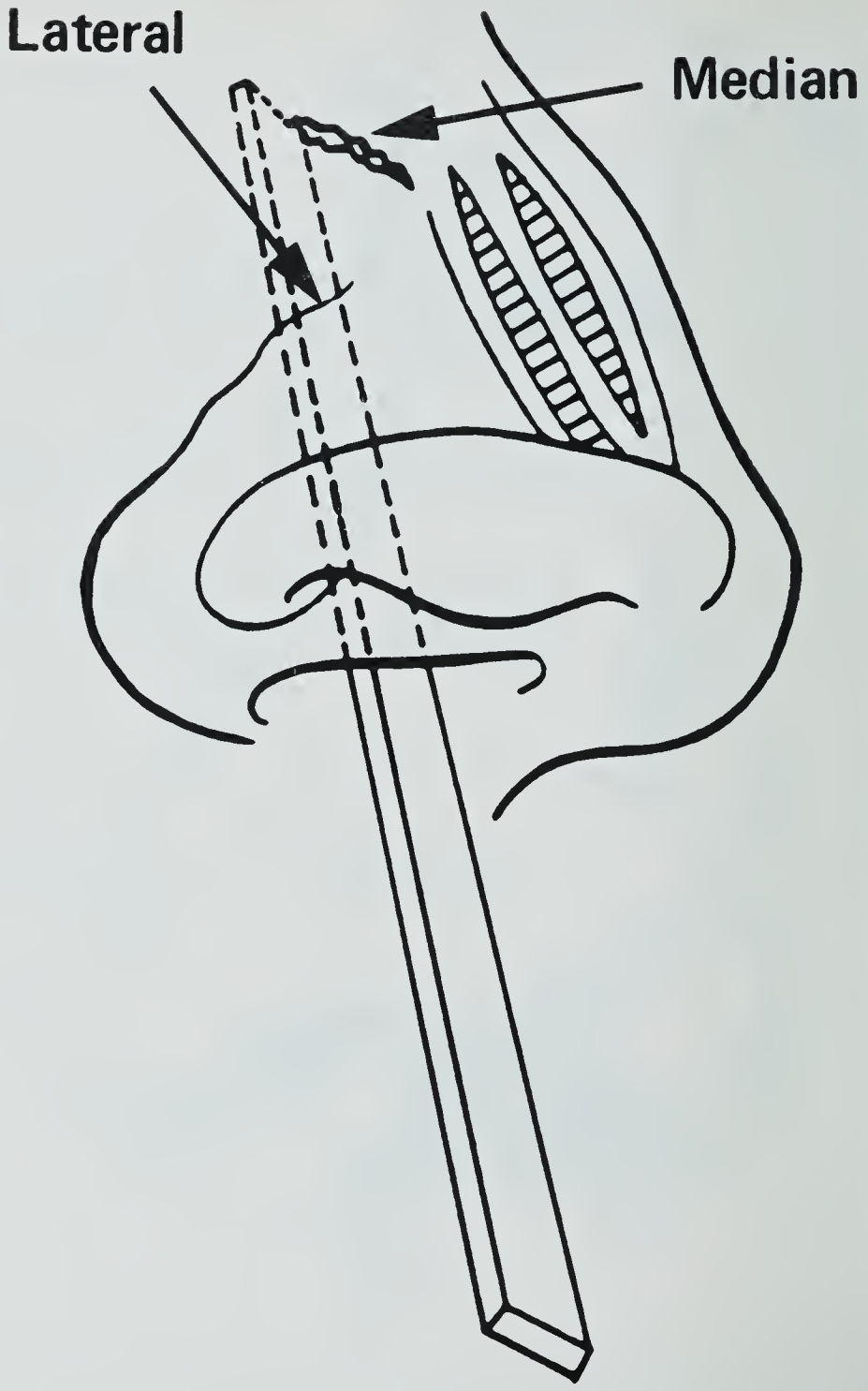


Figure 7. Drawing depicts sites of lateral and medial osteotomies.

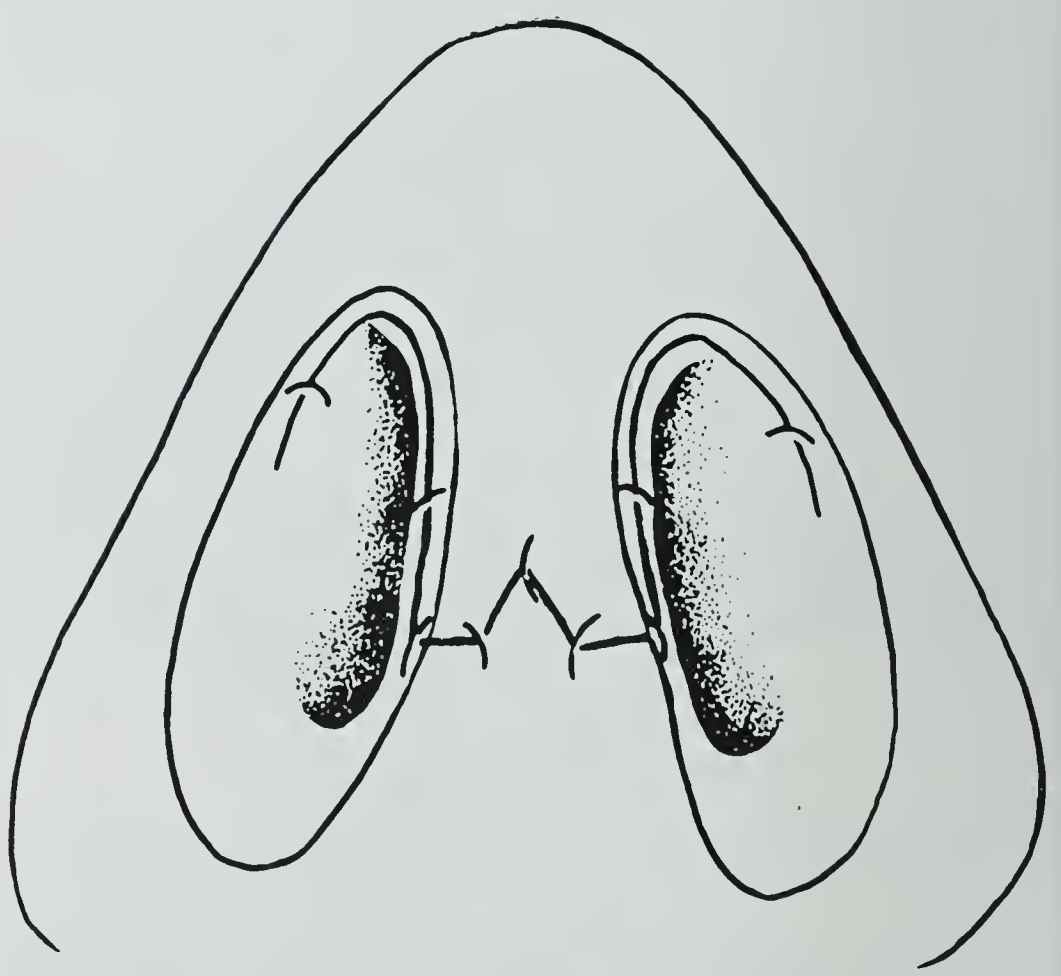


Figure 8. Interrupted sutures close the skin incisions.

large hump nose with cartilaginous deformities; (4) uncertainty of diagnosis; (5) the need for major augmentation procedures; (6) revisional rhinoplasty.

Surgical Technique

The surgical technique involves skin incisions, skin flap elevation, septal surgery, nasal tip surgery, hump removal, osteotomies, inspection and refinement in our two illustrative cases.

Two marginal intranasal incisions are made at the caudal border of the lower lateral cartilages and extended down the lateral caudal borders of the columella. A third incision is made horizontally through the skin at the mid-columella level — always above the feet of the medial crura (Fig. 3). These three incisions allow the surgeon to elevate the skin flap and obtain a maximum view of the supporting nasal structures without directly entering the nasal cavity. The skin flap elevation is carried superiorly over the lower lateral cartilages and upper lateral cartilages remaining external to their perichondrium. It then continues over the bony nasal pyramid but goes inferior to the periosteum (Fig. 4).

Entrance into the septal envelope is obtained at the dorsal caudal border of the quadrilateral cartilage. The mucous membrane is elevated on one side so that the



Figure 9a. Pre-op AP view of patient. Horizontal and vertical lines divide face for evaluation.



Figure 9b. Pre-op lateral view of patient.

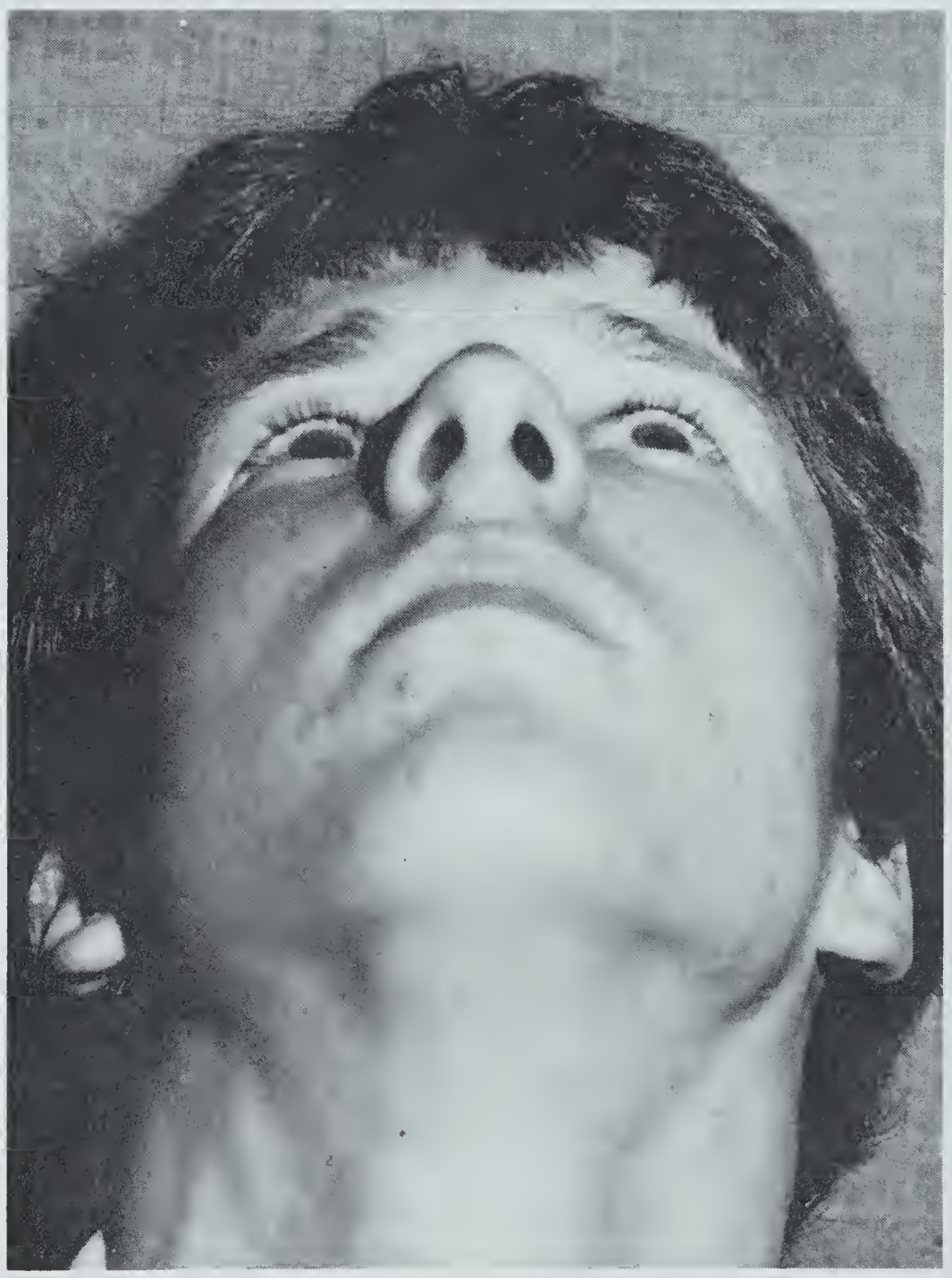


Figure 9c. Pre-op base view of patient.

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References 1. Pitts NE, Migliardi JR: *Clinical Pediatrics* 13:87, 1974. **2.** Modell W: *Drugs of Choice* 1980-1981. C. V. Mosby Co., St. Louis, 1980, p. 362. **3.** Goodman LS, Gilman A: *The Pharmacologic Basis of Therapeutics*, 6th edition, MacMillan Publishing Co., Inc., New York, 1980, p. 1032.

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Figure 9d. Post-op AP view of patient — the columella incision cannot be seen.



Figure 9e. Post-op lateral view of patient.



Figure 9f. Post-op base view of patient.

bony and cartilaginous defects can be removed. One usually finds a quadrilateral cartilage which has subluxed above the floor of the nose into one of the nasal cavities. In addition, the quadrilateral cartilage and perpendicular plate of the ethmoid have frequently deviated into the other nasal cavity.

Next one performs nasal tip surgery if indicated. The lower lateral cartilages are appropriately trimmed to obtain tip definition, rotation, or projection. It is the amount of lower lateral cartilage that remains — not the amount removed — that determines the end result. This remaining cartilage should be a minimum of 5 mm. wide in a female and 7 mm. wide in a male (Fig. 5).

The cartilaginous hump is then removed in an incremental manner with knife and scissors. The bony hump is removed with a saw, rasp, or osteotome (Fig. 6). If the hump is large enough, its removal causes a separation of the lower lateral cartilages and nasal bones from the midline creating a so-called ''open roof.'' To close this defect, one mobilizes the nasal bones and upper laterals by performing lateral osteotomies, and medial osteotomies are also performed if necessary (Fig. 7).

After these procedures are completed, the septum, dorsum and tip are carefully inspected. Then, if necessary, one performs additional maneuvers to achieve refinement. The incisions are then closed (Fig. 8).

Report of Cases

Case 1. A 17-year-old white male sustained a nasal fracture at the age of twelve years. Photographs of the patient prior to his injury showed no nasal deformity. Following the trauma, however, he gradually developed gross distortion of the nasal dorsum and experienced constant right nasal obstruction.

Pre-operative photographic analysis revealed a deviated nasal septum on AP view. The face, however, is

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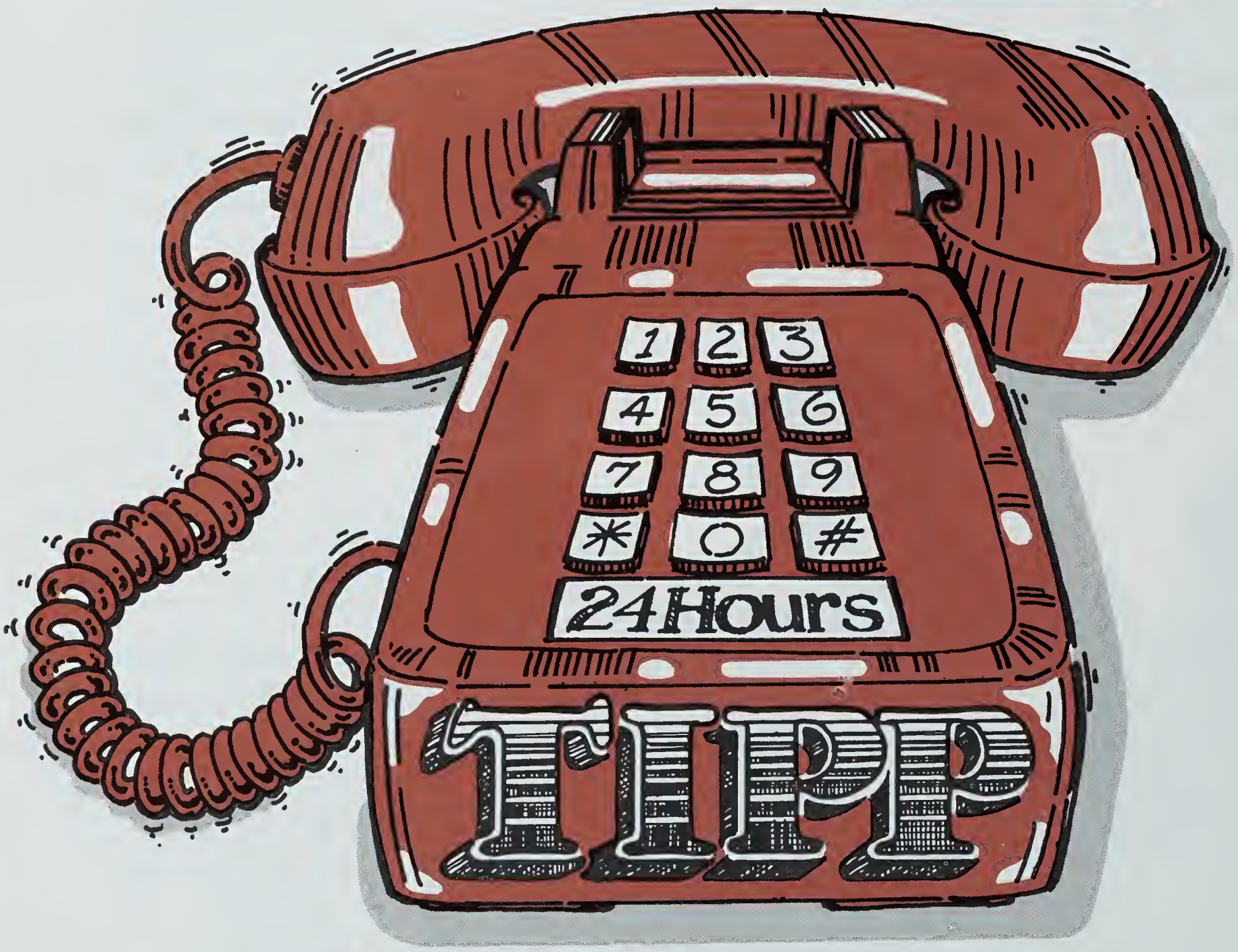
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Figure 10a. Pre-op AP view of patient.



Figure 10b. Pre-op lateral view of patient smiling.

symmetric — the three regions formed by horizontal lines — I, II, III — through the hairline, eyebrows, nasolabial angle, and tip of chin are approximately equal in width (Fig. 9a). Furthermore, the face is appropriately ''5 eyes'' wide — 1, 2, 3, 4, 5 — and the upper lip is one-half the width of the lower lip (Fig. 9a). The lateral view shows the prominent dorsal hump and the columella slightly retracted at the nasolabial angle (Fig. 9b). The base view demonstrates the deviated nasal septum and asymmetric nasal apertures (Fig. 9c).

The patient underwent external surgical reconstruction of his nasal deformities. One week postoperatively



Figure 10c. Pre-op base view of patient.



Figure 10d. The nasal skin flap is retracted upward for viewing the structures which support the external nose.

the AP view shows less septal deviation (Fig. 9d). On lateral view there is no dorsal hump (Fig. 9e). The base view shows less septal deviation and the columella scar can still be seen (Fig. 9f). Note that the scar is not visible on AP or lateral views.

Case 2. A 34-year-old white female presented with a history of intermittent epistaxis, constant nasal obstruction, a prominent dorsal hump, and a large septal perforation suggestive of previous nasal trauma. Preoperative examination and analysis revealed a deviated nasal septum on AP view (Fig. 10a). The face divided into equal horizontal one-thirds and was ''5 eyes'' wide. The upper lip was appropriately one-half the width of the lower lip. On lateral view there was a prominent dorsal hump and the suggestion of retraction of the upper lip onto the columella (Fig. 10b). The base view demonstrated a deviated septum, large septal perforation, and asymmetric nares (Fig. 10c). External reconstruction of her nasal deformities was performed via elevation of the dorsal nasal skin (Fig. 10d). Postoperatively there is less septal deviation on AP view (Fig. 10e). Lateral view shows less dorsal hump and less upper lip retraction (Fig. 10f). On base view there



Figure 10e. Post-op AP view of patient.



Figure 10g. Post-op base view — columella scar barely visible.



Figure 10f. Post-op lateral view of patient.

is less septal deviation and the perforation is smaller. The columella scar is barely visible (Fig. 10g).

Summary

The external technique for surgical repair of nasal deformities involves a single incision in the external skin of the nose in contrast to the conventional septorhinoplasty technique that uses only internal incisions. The resultant scar is so inconspicuous as to be a small price to pay for the wider surgical exposure and improved results. This approach adds no morbidity to the operation and can also be performed under local anesthesia. While there are problems that specifically call for an external approach, this technique can be applied to all cases of septorhinoplasty.

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Coalitions: Getting together to get things done



Mrs. Patty Estock
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Various levels of partnership have been looked at in earlier articles as helping to reach personal, organizational and community goals and needs. We have taken a look at the partnership between the physician and his or her spouse, our partnerships within the auxiliary, the individual county auxiliary's partnership with its state and national affiliations, and the partnership of auxiliary with other community agencies and organizations. It is this last partnership or coalition which will be explored in more depth in this article.

A coalition is a temporary alliance of organizations formed to accomplish a specific goal. Coalitions hold the promise of being one of the chief answers to the problems many community groups face in the 1980's. The development of coalitions is especially critical as all organizations and agencies struggle with the problems of reduced budgets, funding and manpower. Coalitions are most useful whenever you are faced with a goal or project which your group has the desire, but not the resources, to accomplish by itself. You can either give up the idea or you can consider a coalition.

Before you contact other groups carefully analyze your project, determine your needs and develop an action plan. Knowing what you want to do and how you are going to do it are the first steps in forming a coalition.

Look closely at the project you are considering and ask yourself these questions. Is it something your members will support? Can a variety of community groups wholeheartedly back the issue? Is the project something which can be achieved in a given time period — is it an attainable goal? These elements are vital if you are to gain the support you need.

Next, research your proposed project thoroughly. Evaluate the costs involved, the man/womanpower needed, the time involved, the special skills or services required.

Then pull together an outline to show what the goal is, why it's important, what the project will cost, what is needed in terms of volunteers and services, when you plan to begin, how you propose to accomplish the goal, and what your target date is for completion.

A good plan, well thought-out and researched, will impress those you contact with your knowledge of project management and make them want to join forces with you.

Know what you want to do, then contact others.

The next step is to find the right organizations to help. If it's school-oriented, you may want to ask the PTA to join you. If community health is involved, you may want to involve your own medical auxiliary, a hospital or dental auxiliary, American Cancer Society and American Heart Association units, March of Dimes. Choose organizations which have a natural interest in what you have chosen to do.

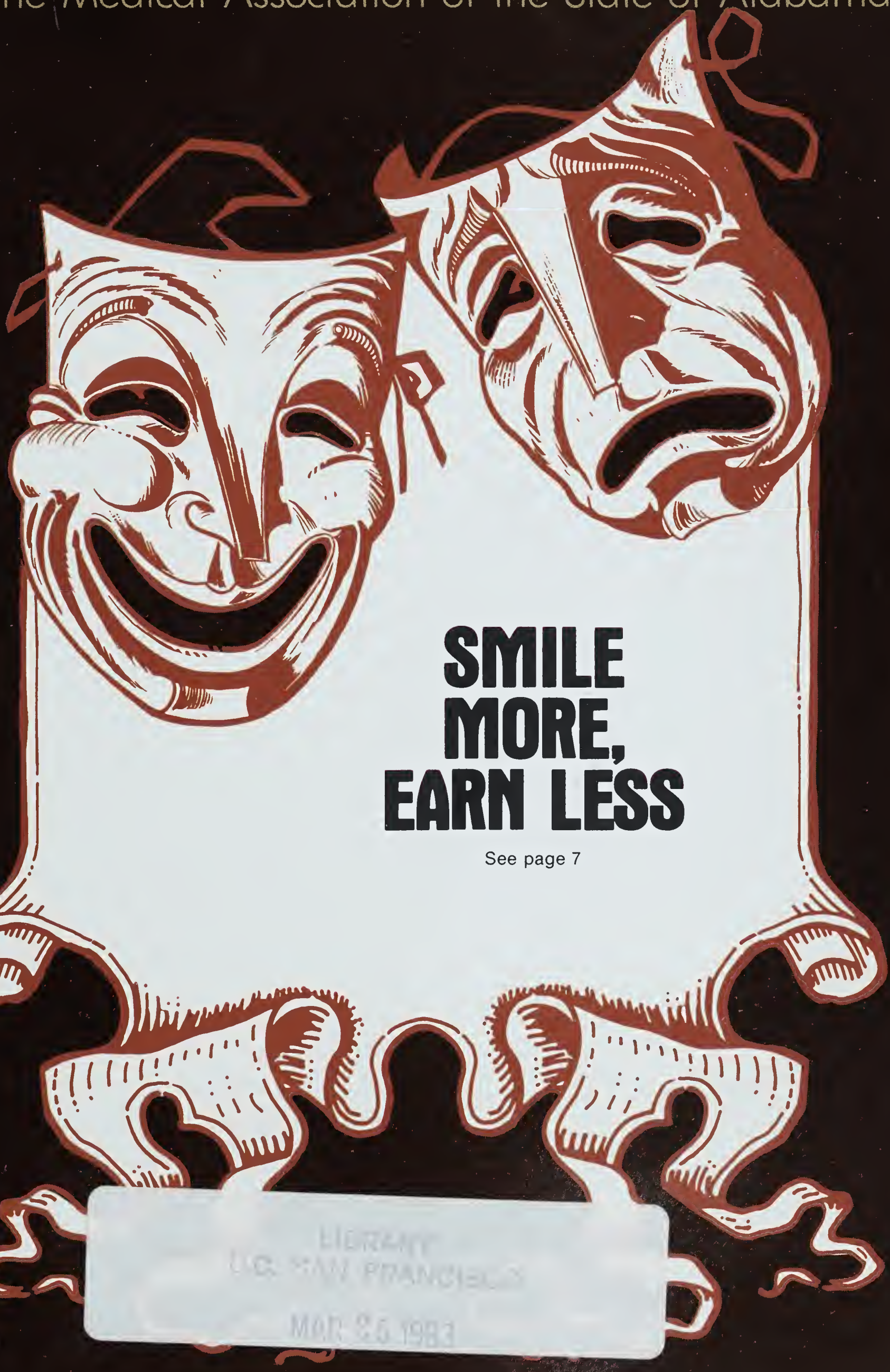
In addition, involve local firms in your coalition. Many are interested in public service projects and they may be able to provide some of the services you need. For example, local businesses might provide typing, telephone, or bookkeeping services. A local art studio might develop layouts and designs for posters or flyers. A local public relations firm might do press releases. Local television stations could produce public service announcements, or a local printer, flyers.

Tap your own community resources. You and your members undoubtedly belong to many organizations or know many people in fields you need. Some might give funds, others volunteers, others services — all of which are needed.

The broader the coalition, the better chance for success. Don't be afraid to ask for help; you never know who will be interested.

Patty

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Alabama Medical Licensure, 1823-1982

The Robert Parker Building, now under construction for the Board of Medical Examiners and the Medical Licensure Commission, is an important milestone, in the long history of medical licensure in Alabama.

Since self-regulation is the essence of professionalism, it seems in order to review the hard-won battles that brought us where we are today. It began, inauspiciously enough, in the town of Cahaba, Alabama's first capital, on Christmas Eve 1823.

Alabama had been admitted to the Union four years earlier. The General Assembly was meeting in Joint Assembly, despite the time of the year, when members would have preferred to be with their families. The sole purpose of that meeting 159 years ago was to implement the First Medical Licensure law. It had passed two days earlier, on Dec. 22, 1823.

''The 1823 Law,'' as it has been referred to ever after, was the watershed from which all subsequent medical practice legislation flowed. That basic law ''placed in the hands of physicians control over their profession,'' writes Howard L. Holley, M.D., in his monumental work, *A History of Medicine in Alabama* (University of Alabama Press, 1982).

Although Alabama was raw frontier then, the need for the regulation of medical practice was seen as one of the first duties of a young state, whose first Governor, William Wyatt Bibb, was a physician. The 1823 law established the principle that physicians were to be examined and licensed by their peers, the ''principle that has been the bedrock of legal regulation of the medical profession in . . . Alabama for over 150 years,'' Dr. Holley writes. ''It has met and survived every challenge presented.''

On that Christmas Eve 1823, the only business was the election of members for the newly established medical boards of Huntsville, Cahaba, Claiborne, Tuscaloosa and Mobile. Other boards were to be added later, but, as Dr. Holley writes: ''Henceforth, the destiny of the medical profession in Alabama would be guided by the physicians of the state; and Alabama physicians proved themselves equal to the challenge.''

Although the principle was sound and the plan a bold one for the times, enforcement proved difficult. Quackery persisted and even grew in the years during and after the Civil War, when the South lay prostrate. Few students could afford regular medical education, even at the reduced rates announced by the Medical College at Mobile when it finally reopened for the 1868-69 year. It was not until 1889 that an illegal practice case actually reached the Alabama Supreme Court. The law was also plagued by exemptions and amendments.

''The practice of medicine was probably regulated more effectively from 1825 to 1860,'' Dr. Holley writes, ''than during the early years following the Civil War.''

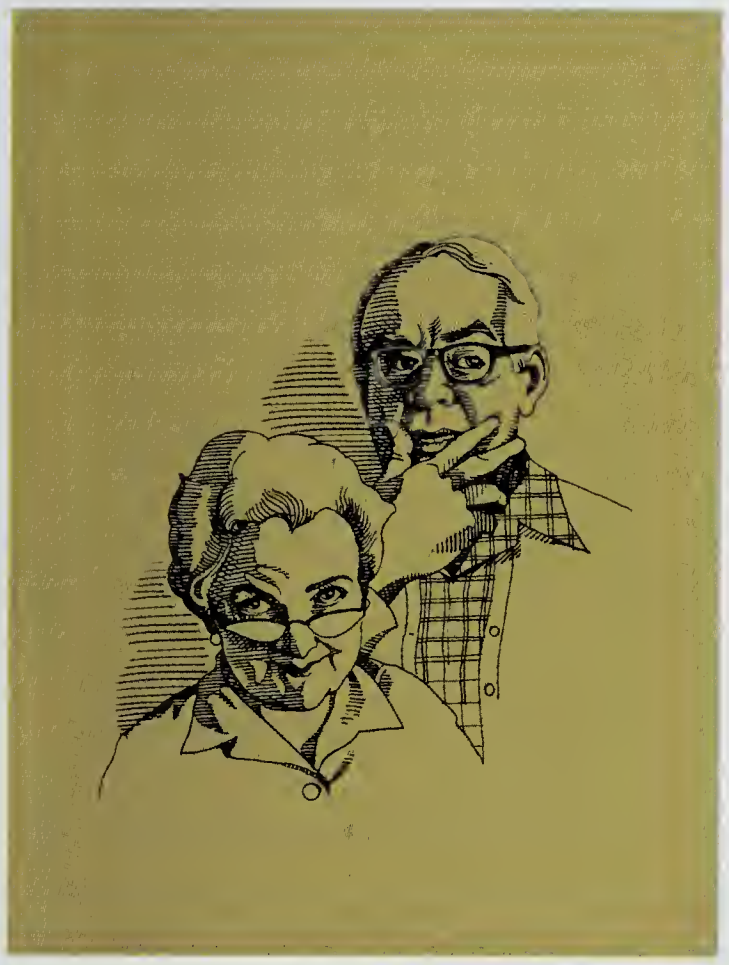
Newspapers of the times made a mockery of the examinations reportedly given to applicants. The public seemed to have little faith in a medical license.

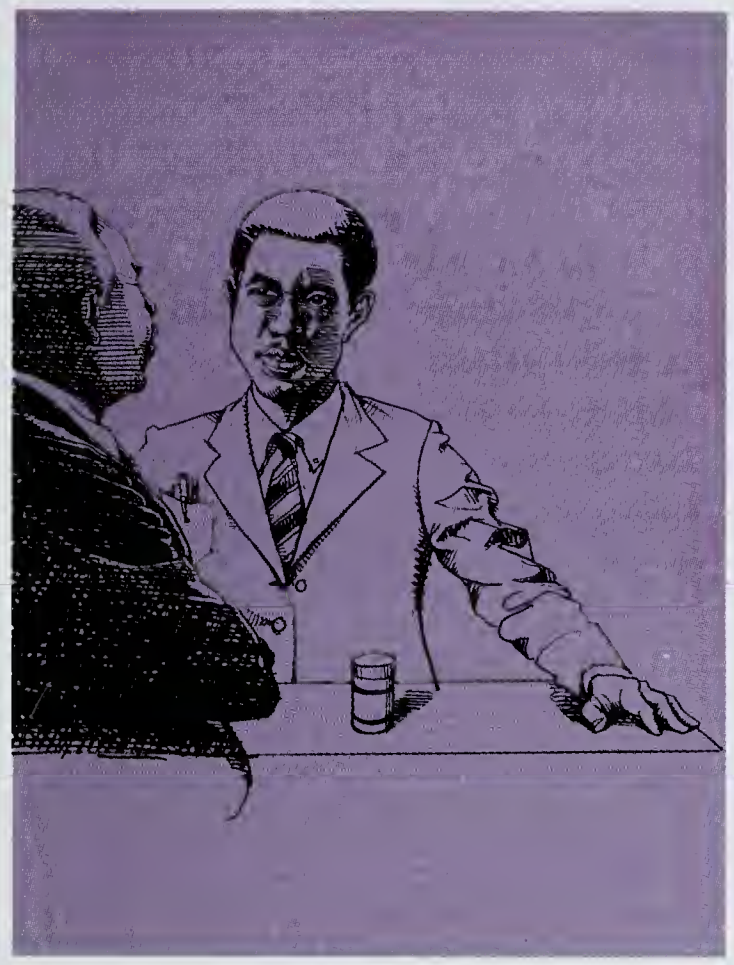
In 1873, Dr. Jerome Cochran's plan for reorganizing the Medical Association of the State of Alabama, which had slipped into oblivion during the war years and Reconstruction, was accepted by members at the annual meeting in Tuscaloosa. The new organizational arrangement, with an executive committee of a Board of Censors (five physicians from 1873 to 1875, then 10) provided a framework for the Medical Practice Act of 1877, strongly advocated by Dr. Cochran. That act set aside the regional boards established by the General Assembly in 1823 and vested examining and licensing authority in the Medical Association. The Act of 1877 established the Board of Censors as the duly authorized State Board of Medical Examiners.

Although the State Board had the ultimate authority, county boards did the actual examining, certifying applicants to the State Board for its approval.

Around the turn of the century, considerable pressure began to grow for a central state licensing authority,

continued on page 8





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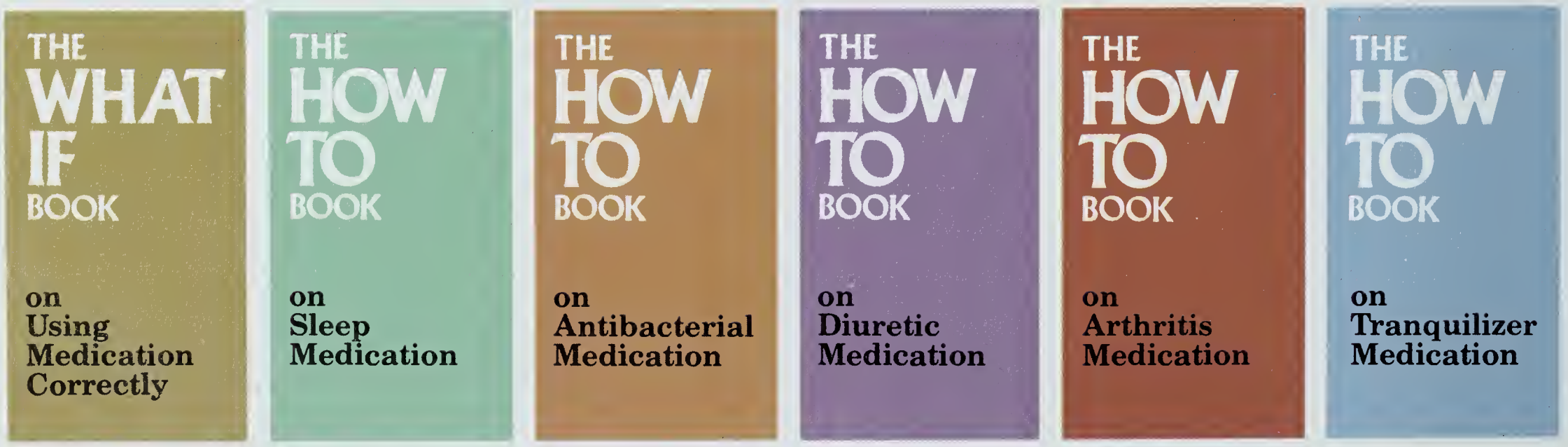
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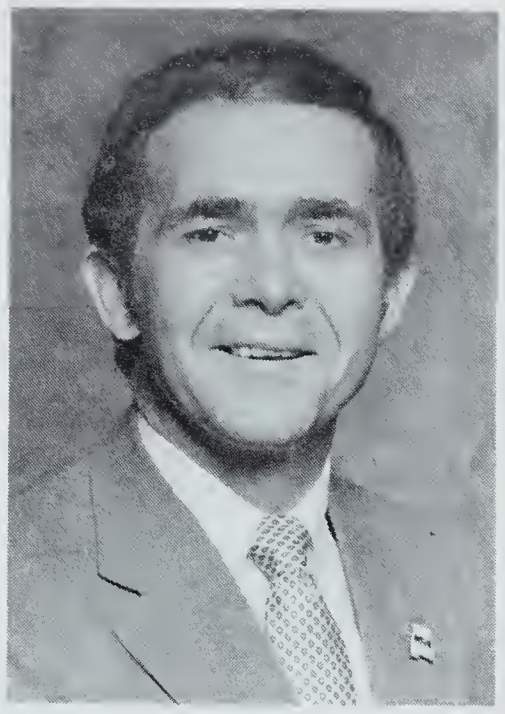
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PRESIDENT'S PAGE



Ronald E. Henderson, M.D.
President, MASA

Smile More, Earn Less

In the months and years just ahead, the cumulative effect of several changes occurring in contemporary society will have a negative impact on the private practice of medicine. Unless we understand the reasons for these changes, physicians could become unhappy, disillusioned and demoralized.

Government and big business are resisting the high cost of medical care. The economy is floundering at worst and flattening at best. Simultaneously there is a rapid growth in the number of physicians. Hospitals are becoming very aggressive in their behavior. Competition is the "in" word of the current administration in Washington.

Resistance to the rapid expansion of government spending for medical care is increasing. The public is reluctant to pay higher taxes and seems to expect continuing access to high quality medical care for less money. At the national level we are hearing more and more about "fixed fees" and "mandatory assignment." The Tax Reform (Tax Equity and Fiscal Responsibility) Act of 1982 will have significant effect on the earnings of hospital-based physicians.

At the state level, compensation for physicians' services already is inadequate under the Medicaid program and is getting progressively worse.

Business and industry are becoming increasingly concerned about the increased cost of medical care. Efforts in this area will result in higher-deductible insurance with an element of continuing copay by the patient. The immediate result will be resistance by the public, at least at first, to seeking elective medical care.

In addition, business leaders are considering freezing fees at present levels or abandoning the usual customary and reasonable mechanism of reimbursement for physicians' fees. Even with the more preferable indemnity system, in which insurance pays a set fee and the patient is expected to pay the difference between that amount and the physician's charge, the immediate effect would be decreased incomes for physicians. When the present recession is over, the economy is likely to grow at a pace much slower than the one we have enjoyed over the past twenty years. Unemployment is likely to remain high, and fewer people will have adequate insurance coverage.

All these events are occurring just when the country is experiencing a surplus number of physicians. Not only will this have a dilutional effect, but physicians will be forced to look at alternative delivery systems and even salaried positions.

The high cost of running an office, the rapidly accelerating cost of professional liability insurance, as well as the high educational debt of young physicians, will make the risk of private practice too great for many doctors starting the practice of medicine. Hospitals, fighting for their very survival, are hiring physicians to man satellite clinics to compete with private practitioners. Also they are pushing for such arrangements as HMOs and preferred provider organizations that will compromise the physician's income even if he maintains his or her independence.

Many battle lines are forming. Physician vs. hospital and physician vs. physician (university physician in hospital vs. community physician in hospital; specialist vs. generalist; surgeon vs. non-surgeon) conflict will become more obvious as the screws are tightened on payment for medical care.

All this change and turmoil is likely to be painful for physicians and patients alike. However, a tremendous opportunity will present itself for the physician to further weld the bond between private practitioner and patient. Government, big business and hospitals all

continued next page

Executive Director *continued from page 4*

to correct the lack of uniformity in county boards. Since the licenses issued at a local level had statewide validity, one argument was, there should be one central state licensing authority, not many.

The Medical Practice Act of 1907 amended the law to require all examinations to treat human diseases to be held in Montgomery, thus eliminating the county boards as primary licensing authorities.

In 1959, the Alabama legislature passed a law revising licensing procedures for all aspiring practitioners of the healing arts in the state. The law established a Basic Science Examination and a State Licensing Board of the Healing Arts, thus placing medical and chiropractic applicants on the same footing. Those passing the basic science exam were certified to their respective licensing boards, the State Board of Medical Examiners and the State Board of Chiropractic Examiners, with the license issued by the Healing Arts Board.

However, the Healing Arts Board was an implausible marriage of convenience that was ended with its abolition by the Legislature in 1981, letting chiropractic go its own way, reaffirming the Board of Medical Examiners and vesting final licensing authority in the Medical Licensure Commission, a body of physicians serving by appointment of the Governor, Lieutenant Governor and Speaker of the House.

The Robert Parker Building will house both the Board of Medical Examiners and the Licensure Commission. It will thus be the latest milestone in a long process that began on that cold Christmas Eve of 1823, in a room lit by candles and warmed by an open fireplace, when 69 members of the General Assembly answered the roll call in Cahaba, establishing the first medical licensing boards and, more importantly, the principle of peer regulation. ⊡

President's Page *continued from page 7*

want direct access to patients. It therefore becomes more important for the private practitioner to do an excellent job as the patient's advocate in all areas. This will involve smiling more while we earn less.

The natural impulse will be to lash out at Blue Cross/Blue Shield and other conduits for reimbursement for government and private sector medical care. This energy can be much better spent supporting your professional leaders so that collectively the physicians of this country could become a significant force helping direct the future of medical care.

The Chinese have a marvelous way of writing the word *crisis*. They combine two characters, *danger* and *opportunity*. I challenge you to recognize the danger in the changes taking place and take this opportunity to improve the image of the medical profession. ⊡

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Drug Dependence: Phendimetrazine tartrate is related chemically and pharmacologically to the amphetamines. Amphetamines and related stimulant drugs have been extensively abused, and the possibility of abuse of phendimetrazine tartrate should be kept in mind when evaluating the desirability of including a drug as part of a weight-reduction program. Abuse of amphetamines and related drugs may be associated with intense psychological dependence and severe social dysfunction. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high-dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG, manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxication is psychosis, often clinically indistinguishable from schizophrenia.

USAGE IN PREGNANCY: The safety of phendimetrazine tartrate in pregnancy and lactation has not been established. Therefore, phendimetrazine tartrate should not be taken by women who are or may become pregnant.

USAGE IN CHILDREN: Phendimetrazine tartrate is not recommended for use in children under 12 years of age.

PRECAUTION: Caution is to be exercised in prescribing phendimetrazine tartrate for patients with even mild hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of phendimetrazine tartrate and the concomitant dietary regimen. Phendimetrazine tartrate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage.

ADVERSE REACTIONS: Cardiovascular: Palpitation, tachycardia, elevation of blood pressure.
Central Nervous System: Overstimulation, restlessness, dizziness, insomnia, euphoria, dysphoria, tremor, headache; rarely psychotic episodes at recommended doses.
Gastrointestinal: Dryness of the mouth, unpleasant taste, diarrhea, constipation, other gastrointestinal disturbances.
Allergic: Urticaria.
Endocrine: Impotence, changes in libido.

OVERDOSAGE: Manifestations of acute overdosage with phendimetrazine tartrate include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states.
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Reference: 1. Sheu YS, Ferguson JA, Cooper JR: *Evaluation of the Abuse Liability of Diethylpropion, Phendimetrazine, and Phentermine,* unclassified document, ADAMHA, HHS. Office of Medical and Professional Affairs, NIDA, 1980, pp 10–15.

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Please see brief summary of prescribing information on the next page.

An Unusual Complication of Nasogastric Intubation

Leon C. Hamrick, M.D.*

A number of complications resulting from nasogastric intubation have been described.[1] Of these, minor problems from nasopharyngeal irritation (such as rhinitis, pharyngitis, sinusitis, and otitis media) and potentially more serious problems from mucosal ulceration, reflux esophagitis, aspiration into the pulmonary tree, knotting of the tube, and perforation of the gastrointestinal tract are more commonly considered.

An additional problem not encountered previously at Lloyd Noland Hospital which can present considerable difficulty in patient management is illustrated by the following case report.

Report of a Case

A 67-year-old female was admitted to the Lloyd Noland Hospital with a plastic nasogastric tube in place.

History revealed that the patient had been confined to a nursing home for ten preceding months with a diagnosis of brain stem infarction and hypertension. Since admission to the nursing home, the patient had been sustained by nasogastric feedings.

Periodic changes in the nasogastric tube had been carried out for three months following admission to the nursing home. Subsequent attempts to remove the tube for change were reported as unsuccessful; and tube feeding plus instillation of medications consisting of Aldomet, Dyazide, potassium chloride, and occasionally milk of magnesia was continued through the same tube over the next seven months. At this time, because of apparent pain associated with the instillation of the feedings, and with improvement in the patient's ability to swallow, she was transferred to the hospital for removal of the tube.

After admission, attempts at removal were made by simple traction, at gastroscopy, and again by manipulation and traction under fluoroscopic examination. Neither attempt was successful.

A summary of the endoscopic findings by the consulting gastroenterologist was as follows: ''Under direct visualization, the Olympus GIF-Q panendoscope is advanced into the esophagus where a nasal gastric tube is detected. This is followed to the distal esophagus which is erythematous and somewhat friable without any evident ulceration. The tube is seen to be coiled and to have at least one tight overhand knot within it. The tube is also somewhat rigid in its most distal tip which cannot be well visualized. Multiple attempts at straightening the tube, uncoiling it and removing it with the pediatric forceps and biopsy forceps are all unsuccessful. The instrument is withdrawn and subsequently reinserted for a second attempt. This attempt is initiated in the fundus where the loop of nasal gastric tube is increased and then advanced into the antrum. Again removal is without success, and the study is terminated.''

The descriptive report of the radiologist concerning the position of the tube read ''There is an NG tube noted in place. It could not be satisfactorily visualized, so a small amount of gastrografin was injected through the

* Department of Surgery, Lloyd Noland Hospital and Clinic, Fairfield, Alabama.

tube. This reveals the tube to pass through the esophagus with the tip located within the fundal area of the stomach. Within the stomach, the tube is looped upon itself; however, there is no evidence of obstruction of the tube'' (Fig. 1).

On the second day following admission, under endotrachael anesthesia, removal of the tube was effected by gastrotomy through an upper midline incision.

At gastrotomy, the intragastric portion of the tube was found to be twisted and coiled upon itself, was rock-hard and as rigid as copper tubing. Above the esophagogastric junction, as marked by an arrow in Fig. 2, the tube was pliable and of the usual resiliency expected for a plastic tube.

Following surgery the patient was graduated to a full liquid diet and was taking medications orally when released from the hospital on the sixth post-operative day.

Comment

This unusual type of complication from prolonged nasogastric intubation with a plastic tube was described by Drenick and Lipset in 1971. In a letter to the Editor of the JAMA,[2] they offered the following explanation for the adverse change in the tubing. ''Medical tubing consists of a vinyl chloride resin to which is added bis (2-ethylhexy) phthalate, an ester which makes the rigid resin more flexible. Within the stomach, bis (2-ethylhexy) phthalate, the softening agent, can be hydrolyzed and extracted from the plastic either by hy-

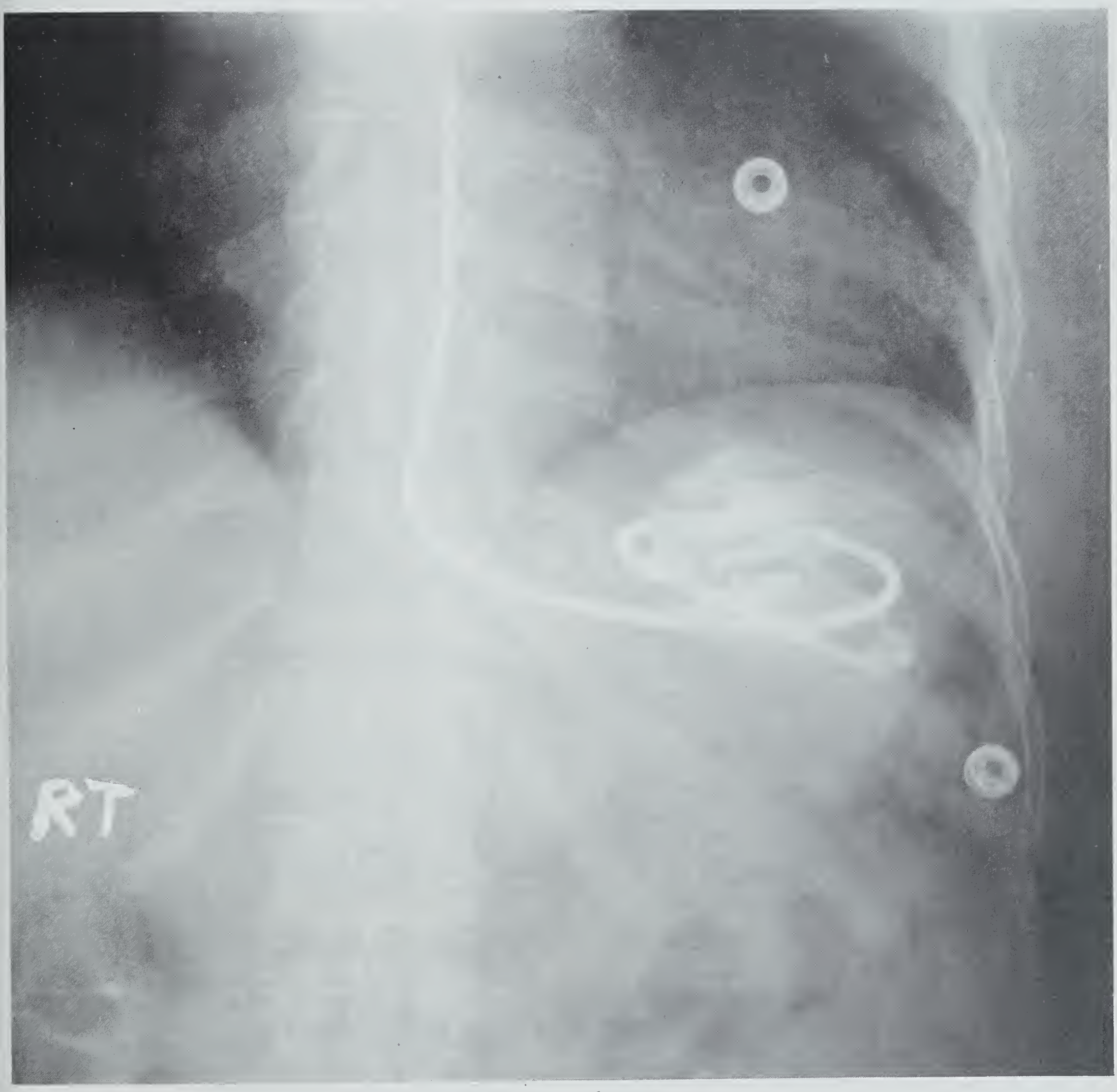


Figure 1

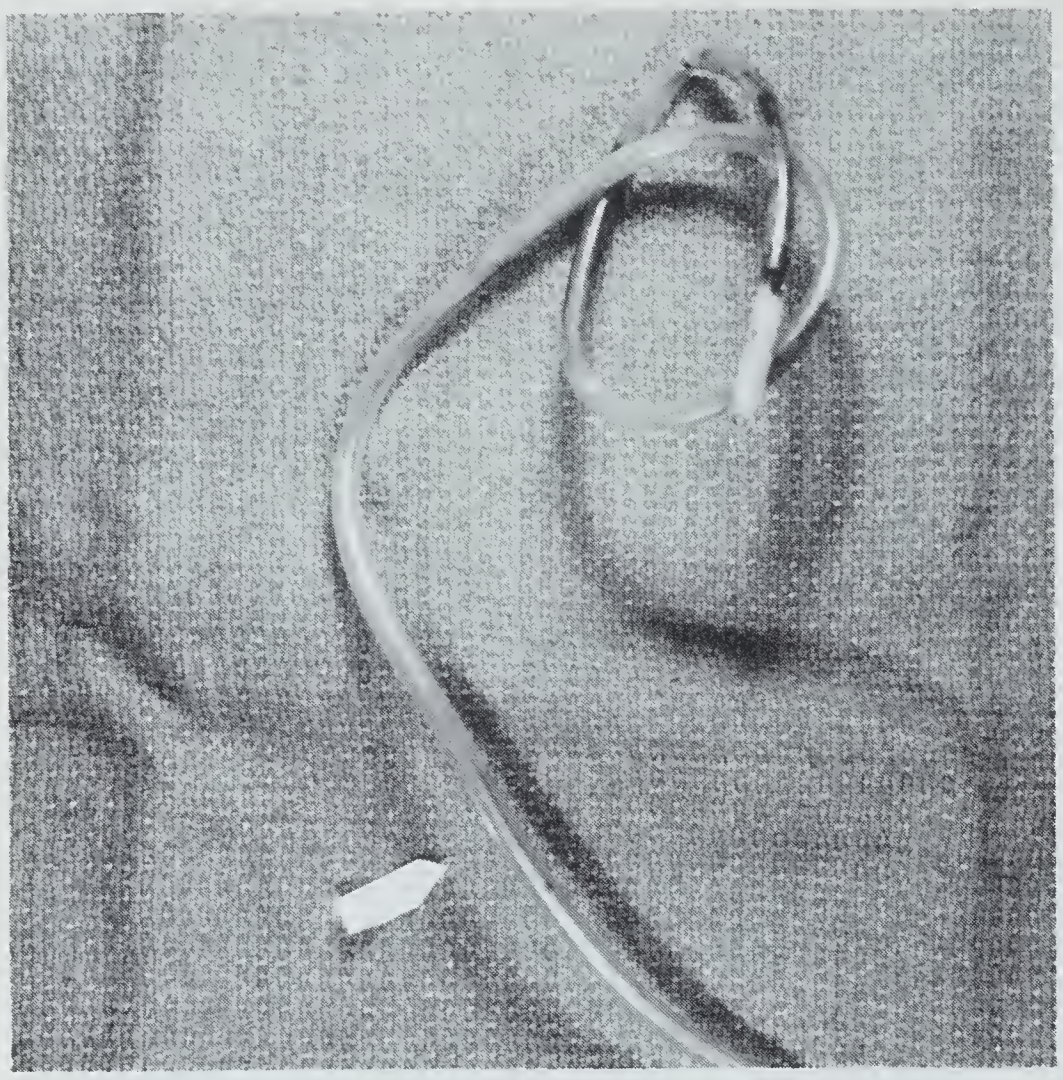


Figure 2

drochloric acid or by alkaline solutions entering the stomach from the duodenum. Given a sufficiently long exposure the plastic tubing may become progressively stiffer.''

Our case report further emphasizes the correct policy of regular and frequent (at least every two weeks) replacement of plastic nasogastric tubes and caution against their forceful removal by traction.

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1. Hafner, C. D., Wylie, J. H. and Brush, B. E.: Complications of Gastro-Intestinal Intubation. Arch. Surg. 83:163-175, 1961.
2. Drenick, E. J. and Lipset, M.: Difficulty With Removal of Plastic Nasogastric Tubes. JAMA Vol. 218, No. 10, 1573, Dec. 6, 1971.

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How New Tax Law Affects Physicians' Pension Plans*

Geoffrey T. Anders, J.D., C.P.A.
Leif C. Beck, LL.B., CPBC
J. Thomas Martin, J.D. and
Michael J. Gannon, J.D.†

The recently passed Tax Equity and Fiscal Responsibility Act of 1982 promises major changes in the ways physicians plan for retirement and possibly in the way they structure their practices.

While it is still early some initial thoughts and reactions to the Bill's provisions are in order. As time passes and advisors have had more of a chance to dissect the law's provisions, additional ideas and planning considerations will undoubtedly come to light. Nonetheless, some doctors will be tremendously affected, so early consideration of the law's changes is in order.

Corporate Retirement Plan Changes

Contributions to money purchase pension plans and profit sharing plans (so-called defined contribution plans) will be limited to 25% of salary and not more than $30,000 beginning for plan years beginning after December 31, 1982. Defined benefit plan limitations have been reduced to the lesser of 100% of compensation or $90,000. While both these new limitations will apply beginning in 1983, any new plans established after July 1, 1982 must use the new rules — so it is too late to quickly adopt plans in the hope of getting a year or two of heavy contributions in under the wire.

While those rules in themselves will limit incorporated doctors' retirement plan contributions, the situation is even worse since most practices will fall within a new classification of "top heavy plans." These additional restrictions are discussed below.

In addition to reducing the amounts which might be contributed to retirement plans, other negative changes have been made. For example, previously the dollar limit on contributions was increased annually by a cost of living factor. Under the new law the dollar limitations are frozen until 1986.

Furthermore, most defined contribution plans are "integrated" with Social Security to provide a 7% extra contribution on salaries which exceed a specified amount. Beginning in 1983 the 7% integration differential is reduced to the actual Social Security tax paid by the professional corporation for Old Age, Survivors and Disability Insurance (which is only a part of the present 6.85% employer's Social Security tax). Thus the costs of staff participation will increase accordingly.

For doctors with defined contribution plans, the best present strategy should be to maximize plan contributions this fiscal year (and next fiscal year if the year end is set in October, November or December). It may be well to use current year cash to fund a higher level of salaries, accruing the plan contribution for payment in the next year or perhaps borrowing to make the plan

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† The authors are the principal attorneys affiliated with The Health Care Group, Inc., Bala Cynwyd, Pennsylvania.

contributions. Unfortunately this maximum funding approach will not work for defined benefit plans.

Perhaps defined benefit plans and the so-called 1.4 rule situations (a defined benefit plan in combination with a defined contribution plan) are hardest hit. Defined benefit plans with a lower than age 62 normal retirement date, must take into account actuarial reductions in the benefit formula. Plans with an age 55 normal retirement date may only be able to fund for a $75,000 annual benefit (rather than the new $90,000 annual benefit).

The ''1.4 rule'' plan arrangements (a combined defined benefit plan and money purchase pension plan) will be reduced to 1.25 of the respective plan dollar limitations; and because of the ''top heavy plan'' rules, unless additional benefits are funded for non-doctor employees that 1.25 might be further reduced to 1.0. Thus physicians presently contributing to both a defined benefit plan providing for a 100% of salary retirement benefit and a 10% money purchase pension plan may find themselves limited to only the defined benefit plan under the new decreased dollar limitations.

Doctors who have defined benefit retirement plans with benefits already funded to exceed the new law's limitations will be frozen out from making additional retirement plan contributions until 1986 or perhaps even later. At that point cost of living increases in the dollar limitations may permit additional contributions.

There does not appear to be a good way around this situation. Even terminating a defined benefit retirement plan (where the benefits exceed the new limits) and adopting the more traditional defined contribution plans still may not permit contributions in excess of perhaps 10% of salary or $7,500, whichever is less.

Also hard hit will be some doctors who purchase life insurance through their retirement plans. With the reduced funding limitations, current insurance amounts may exceed the maximum amounts permissible, forcing cancellation of some of the insurance. Since it takes years and years of premium payment to recoup the front end costs of insurance, many doctors will simply find they have paid premiums for nothing.

Certainly each situation will need individual consideration to decide on the best way to proceed in the future. Still, it appears that some physicians will be unable to contribute to retirement plans over the next several years.

The one ''beneficial provision'' in the new rules is that existing corporate retirement plans need not be amended to comply with the new rules until late in 1983. Presumably this is to permit professionals to consider ''unincorporating'' before incurring the expenses of substantially rewriting their present retirement plans. This possibility is discussed further below.

Keogh Plans

While the changes to incorporated doctors' retirement plans are uniformly more restrictive, the contrary is true for unincorporated doctors' Keogh Plans. The Keogh Plan rules have been liberalized making those plans comparable with corporate plans.

Beginning in 1984 Keogh Plans will fall under the same restrictions for contributions as do incorporated doctors' retirement plans. Thus with an appropriate plan or plans an unincorporated doctor will be able to contribute up to 25% of his earned income (after subtracting the resulting contribution to the retirement plan).

Thus a doctor with net earnings of $100,000 would be able to contribute $20,000 per year to a Keogh Plan or plans ($100,000 earned income less $20,000 of Keogh contribution equals $80,000 times 25% or $20,000).

Other rules have also been substantially liberalized to parallel corporate plan restrictions. Doctors will now be able to self-trustee their own Keogh Plans, make quite substantial non-deductible voluntary contributions, and integrate their retirement plans with Social Security. Additionally, the flexibility available in a corporate profit sharing plan (i.e. the ability to contribute anywhere between 0% and 15% of salary each year) has been extended to Keogh type profit sharing plans.

Other rules have further liberalized the restrictions placed on Keogh Plans and it even appears that unincorporated doctors may borrow from their Keogh Plans although only within the new plan loan restrictions contained in the Act.

Certainly doctors considering incorporation in the near future should re-think their plans. Corporate practice will be beneficial in only very few instances, such as where a high level of medical expenses are incurred regularly. Otherwise the remaining corporate fringe benefits are offset by the higher costs of the on-going corporation. Very critical consideration is now called for before incorporating a practice.

'Top Heavy' Plans

While the overall changes to corporate retirement plan contributions are bad enough for doctors desiring a heavy level of retirement plan funding, those doctors may also find that continuing their retirement plans will be more costly in terms of employees' benefits. Almost all physicians will find themselves within the new ''top heavy plan'' classification which begins in 1984.

That situation exists where for any plan year the sum of ''key'' employees accrued benefits or accounts exceed 60% of the total of all employees accrued benefits or accounts. A ''key'' employee is any officer of a corporation or any greater than 5% stockholder or any greater than 1% stockholder who has earnings over $150,000.

For these ''top heavy'' plan situations very quick vesting schedules must be provided for the non-key employees. Top heavy plans will be required to vest

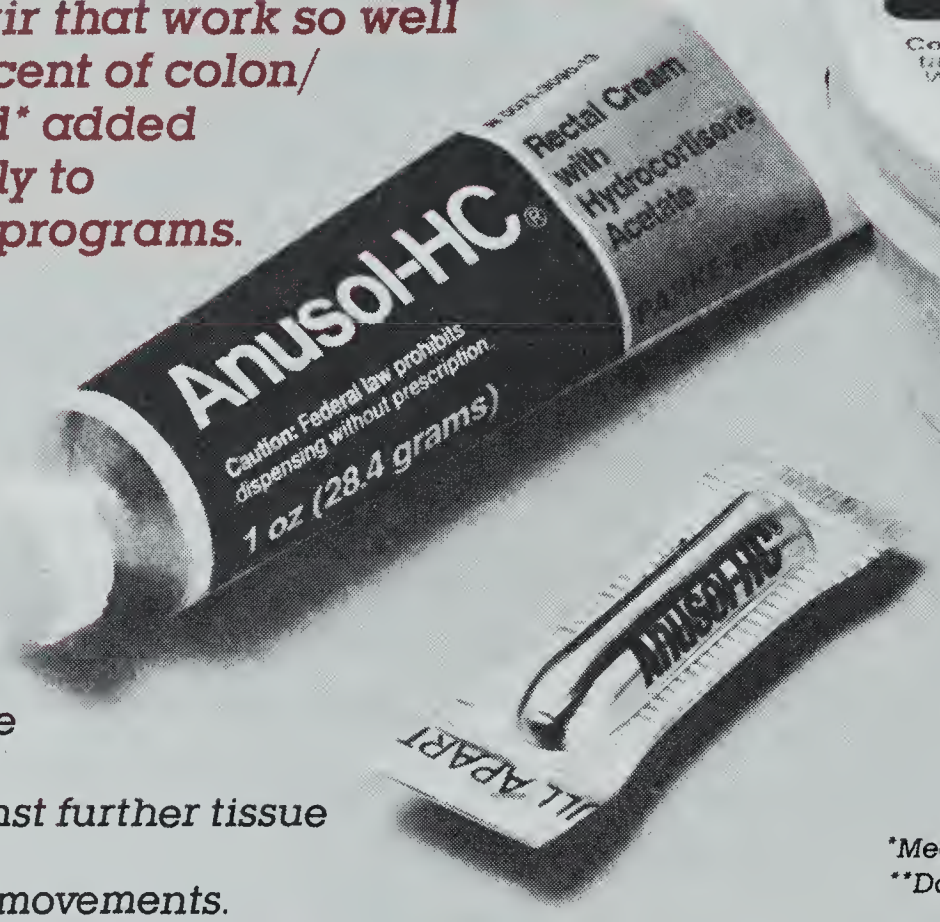
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- ☐ *Astringent, to protect against further tissue damage.*
- ☐ *Emollient, for easier bowel movements.*

Please see opposite page for brief summary of prescribing information.

**Meeting of Am Soc Colon/Rectal Surgeons, May 1980*
***Data on file, Marketing Research Dept, Parke-Davis*

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PD-85-JA-1336-P-1(11-82)

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TUCKS® Pre-Moistened Hemorrhoidal/Vaginal Pads

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- ☐ *Soothes, cools, comforts, and cleanses irritated anorectal areas.*

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Vaginal Uses — Comforting as an adjunct in postoperative care after episiotomies and other vaginal surgery or when relief from vaginal itching, burning or irritation is required.

ANUSOL-HC® SUPPOSITORIES
Hemorrhoidal Suppositories with Hydrocortisone Acetate

ANUSOL-HC® CREAM
Rectal Cream with Hydrocortisone Acetate

Caution: Federal law prohibits dispensing without prescription.

Description: Each Anusol-HC Suppository contains hydrocortisone acetate, 10.0 mg; bismuth subgallate, 2.25% bismuth resorcin compound, 1.75%; benzyl benzoate, 1.2%; Peruvian balsam, 1.8%; zinc oxide, 11.0 mg; also contains the following inactive ingredients: dibasic calcium phosphate, and certified coloring in a hydrogenated vegetable oil base.

Each gram of Anusol-HC Cream contains hydrocortisone acetate, 5.0 mg, bismuth subgallate, 22.5 mg; bismuth resorcin compound, 17.5 mg; benzyl benzoate, 12.0 mg; Peruvian balsam, 18.0 mg; zinc oxide, 110.0 mg; also contains the following inactive ingredients: propylene glycol, propylparaben, methylparaben, polysorbate 60 and sorbitan monostearate in a water-miscible base of mineral oil, glyceryl stearate and water.

Anusol-HC Suppositories and Anusol-HC Cream help to relieve pain, itching and discomfort arising from irritated anorectal tissues. These preparations have a soothing, lubricant action on mucous membranes, and the antiinflammatory action of hydrocortisone acetate in Anusol-HC helps to reduce hyperemia and swelling.

The hydrocortisone acetate in Anusol-HC is primarily effective because of its antiinflammatory, antipruritic and vasoconstrictive actions.

Indications and Usage: Anusol-HC Suppositories and Anusol-HC Cream are adjunctive therapy for the symptomatic relief of pain, itching and discomfort in: external and internal hemorrhoids, proctitis, papillitis, cryptitis, and fissures, incomplete fistulas, pruritus ani and relief of local pain and discomfort following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present. After acute symptoms subside, most patients can be maintained on regular Anusol® Suppositories or Ointment.

Contraindications: Anusol-HC Suppositories and Anusol-HC Cream are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparations.

Warnings: The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy, they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

Precautions: General: Symptomatic relief should not delay definitive diagnoses or treatment.

Prolonged or excessive use of corticosteroids might produce systemic effects.

If irritation develops, Anusol-HC Suppositories and Anusol-HC Cream should be discontinued until the infection has been adequately controlled.

Anusol-HC is not for ophthalmic use.

Pregnancy: See "WARNINGS"

Pediatric Use: Care should be taken when using the corticosteroid hydrocortisone acetate in children and infants.

Dosage and Administration: Anusol-HC Suppositories — Adults: Remove foil wrapper and insert suppository into the anus. Insert one suppository in the morning and one at bedtime for 3 to 6 days or until inflammation subsides. Then maintain comfort with regular Anusol Suppositories.

Anusol-HC Cream—Adults: After gentle bathing and drying of the anal area, remove the tube cap and apply to the exterior surface and gently rub in. For internal use, attach the plastic applicator and insert into the anus by applying gentle continuous pressure. Then squeeze the tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days until inflammation subsides. Then maintain comfort with regular Anusol Ointment.

NOTE: If staining from either of the above products occurs, the stain may be removed from fabric by hand or machine washing with household detergent.

How Supplied: Anusol-HC Suppositories — boxes of 12 (N 0071-1089-07) and boxes of 24 (N 0071-1089-13) in silver foil strips with Anusol-HC printed in black.

Anusol-HC Cream — one-ounce tube (N 0071-3090-13) with plastic applicator.

Store between 15° - 30° C (59° - 86° F).
1089G010

employee benefits at the rate of 20% per year beginning with an employee's second year of service. Under this format employees will entirely vest in their retirement benefits after only six years.

Alternatively, doctors may elect to exclude employees from participation for three years (similar to the old Keogh rules) but then all contributions or benefits will be 100% vested.

Also required minimum contributions or benefit levels must be funded. In the case of defined contribution (money purchase pension and/or profit sharing) plans, employees must be provided with contributions of at least 3% of salary per year. The rules permitting integration with Social Security do not affect this minimum contribution rule.

Similar provisions in defined benefit plans provide that an employee's accrued benefit must equal 2% of salary times the number of years of service up to a maximum of 20%. In determining whether these minimum requirements are met, all plans of the corporation are considered together. In the case of a combined defined benefit and defined contribution plan only one of the plans need meet the new requirements, but the more complicated minimum benefit levels are somewhat higher.

For most physicians these minimum contribution rules will have little effect. However, where a doctor or group maintains only an integrated profit sharing plan and where only minimum contributions are made, the ability to make future contributions at all will be restricted by the necessity of providing for staff benefits as well.

Unincorporated doctors should note that with the liberalization of the Keogh Plan rules, they also become subject to the "top heavy" plan restrictions.

Retirement Plan Loans

Effective August 13, retirement plan loans have been significantly limited. While any outstanding loans are unaffected, any new loans made after August 13 cannot cause the total outstanding amounts to exceed $50,000 or one-half of the participant's vested interest, whichever is less.

However, if a participant's vested interest is less than $10,000, loans may be advanced up to that amount (assuming adequate collateral is pledged). Any refinancing, extension or renegotiation of a currently outstanding loan is treated as though it were a new loan for these rules.

Additionally, any new loan must be repaid within five years or the balance due after five years is considered a taxable distribution. One exception to the five year repayment rule is allowed in the case of loan amounts used to purchase, build or substantially rehabilitate a doctor's primary home.

These rules apparently apply to Keogh Plans as well as to corporate retirement plans, although Keogh Plans

will need to be amended to permit borrowing under the terms of the plan.

Retirement Plan Distributions

Several key changes have been made in the laws governing distribution from retirement plans. First for ''key'' employees distributions of retirement plan funds must begin no later than age 70½, regardless of whether the doctor actually retires or not.

Of worse consequence is the change in the estate tax exclusion which was previously permitted retirement plan dollars. Under current law distributions from a plan made in installment payments over two or more years, are excluded from a doctor's estate. However, beginning in 1983, the exclusion from estate tax will be limited to $100,000.

This change should again necessitate doctors reviewing their present estate plan. In many cases the $100,000 cap on the estate tax exclusion will result in substantially increased estates. At least a review of already established estate plans is called for to determine the effect of this change. In some cases a complete revision in the estate plan may be necessary.

Corporate Fringe Benefits

Changes were also made in the rules permitting $50,000 of group term life insurance as a corporate fringe benefit. In 1984 the new rules require group term life insurance plans to cover at least 70% of employees (with certain exclusions for part-time employees and staff with less than three years of service) and for ''non-discriminatory'' plan benefits.

Since providing life insurance coverage as a uniform percentage of salary is acceptable as non-discriminatory, doctors may need to revise their plan set up but should not be prevented from continuing this fringe benefit program.

While generally minimizing the differences between incorporated and unincorporated doctors, changes in the individual income tax law actually make corporations more valuable in certain situations. Beginning in 1983 personal income tax deductions for medical expenses will be limited to medical expenses in excess of 5% of adjusted gross income (replacing the previous 3% rule).

With that change doctors with a heavy level of personal or family medical expenses will find the benefit from corporate medical expense reimbursement plans or cafeteria health plans to be substantially increased.

'Unincorporating'

By eliminating the more favorable corporate retirement plan rules as compared with Keogh Plans, it is clear that few unincorporated physicians should now move to incorporate. In passing the law Congress recognized that many presently incorporated professionals may wish to ''unincorporate.'' Without the greater retirement plan benefits, incorporation is typically a break-even proposition at best. The additional expenses incurred by practicing through a corporation such as the variety of payroll taxes on the doctor's salary, the on-going additional legal and accounting expenses and the possibility of double taxation on IRS asserted dividends will often equal or exceed the dollar benefits from the few remaining corporate fringe benefits.

A critical evaluation of each incorporated doctor's situation is clearly called for. While we plan to deal in depth with the possibility of ''unincorporating'' in a future article in this series, no general advice can presently be applied to all situations.

In recognizing that professionals may wish to unincorporate, Congress inserted special rules to apply only in 1983 and 1984 for liquidating professional corporations. Those rules limit the negative tax impact which would normally accompany dissolution of a corporation. For example, accounts receivable would not be automatically recognized as income nor would a practice's goodwill be taxed to the unincorporated doctors who continue the practice.

While the major negative tax impact has been eliminated by these special provisions, that is not to say that no tax would result from the liquidation. Shareholder doctors would still receive dividend income to the extent that their corporations had ''earnings and profits,'' a term comparable to retained earnings. Thus if ''unincorporating'' the practice seems to be a favorable move, steps may need to be taken to reduce earnings and profits well before the liquidation can occur.

Ophthalmologists, free standing radiology practices and other specialties where a large investment in equipment or investments have been made through the corporation will require particularly careful planning. In those situations and in other cases of high retained earnings balances, it may be possible to accrue retirement plan contributions for payment after the end of the fiscal year.

Currently available cash is instead used to pay salary, bonuses and other obligations. The net effect of such a plan is to use previous year's corporate earnings for contribution to retirement plans thus reducing the built up ''earnings and profits,'' making the liquidation less costly.

Miscellaneous Changes

A variety of other changes are made in the new tax law. Several of these will impact professional practices and the way they operate. The major provisions are detailed below.

Some professional corporations in an effort to circumvent covering staff employees in their retirement plans have arranged for ''employee leasing'' or ''contract staffing.'' Essentially an unrelated business hires the practice's staff and leases back those people to the

corporation. Congress has now properly moved to close this ''loophole'' by providing that any leased employee who works on a substantially fulltime basis for a practice in excess of twelve months is considered an employee of that practice for retirement plan purposes.

This need not be the result if the leasing company itself provides a nonintegrated money purchase pension plan with a minimum 7½% contribution rate that also provides for immediate participation and vesting. So while the employee leasing approach is not totally foreclosed, we suspect that the economics of contract staffing will be such that little or no cost savings actually will result to doctor's practices.

The viability of some partnership of professional corporations has also been called into question because of a provision specifically aimed at overruling the court decision in *Keller v. Commissioner*. In that case a doctor's incorporation of his partnership interest was upheld even though the sole purpose for incorporation was to obtain the tax benefits of corporate retirement plans and medical expense reimbursement plans.

In the new law's design, the IRS will have discretion in similar situations to allocate income, deductions, etc. between the doctor and his professional corporation so that no tax benefit is available only because of the corporation's existence.

This provision promises to eliminate partnership of P.C. arrangements. Typically, partnerships of professional corporations were entered into to provide greater flexibility in retirement plan contributions and fringe benefits than would have been available under a single corporate or partnership set up.

While it is not presently clear how broad the sweep of the new provision will be, doctors considering restructuring their practice to a partnership of professional corporations would be best advised to delay such actions for the time being.

Investment tax credit rules were also changed somewhat so that for equipment placed in service after 1982, a 10% investment tax credit will only be available if the basis for depreciation deductions is reduced by one-half the investment tax credit. In the alternative the doctor or practice may simply elect to take an 8% tax credit without any reduction in a depreciation base.

A present value analysis of the two alternatives shows that they are essentially equivalent. The 10% tax credit (with the reduction in the depreciation allowable) is slightly better since the cash flow under that election is faster than under the 8% credit.

Two planning matters arise because of this change. First doctors considering the purchase of substantial amounts of equipment will be well advised to have the equipment installed before the end of the year. Speeding up the decision to buy saves tax deductions equal to one-half of the tax credit.

Doctor groups whose buy-sell agreements calculate equipment values based upon depreciated cost should change those agreements to reflect that depreciated values should be calculated without regard to the one-half of investment tax credit mark down. Without such revisions, doctors leaving a group could be short-changed (if the original cost is understated by the non-depreciable amount) or paid too much (if the full original cost was used but the lesser depreciation deductions permissible for tax purposes are taken into account).

Perhaps the most recent insurance company product with which many doctors have been bombarded is ''flexible premium'' or ''universal'' life insurance. The new tax act provides a variety of requirements with which the policies must comply in order for the proceeds from the policy to be excluded from income taxation under the usual life insurance rules.

Decisions to purchase universal life insurance should be forestalled until and unless the insurance company can guarantee that it meets the new requirements. For those doctors who may have purchased such a policy already, agents should be contacted promptly to ascertain whether or not the policy in question meets these rules.

Conclusion

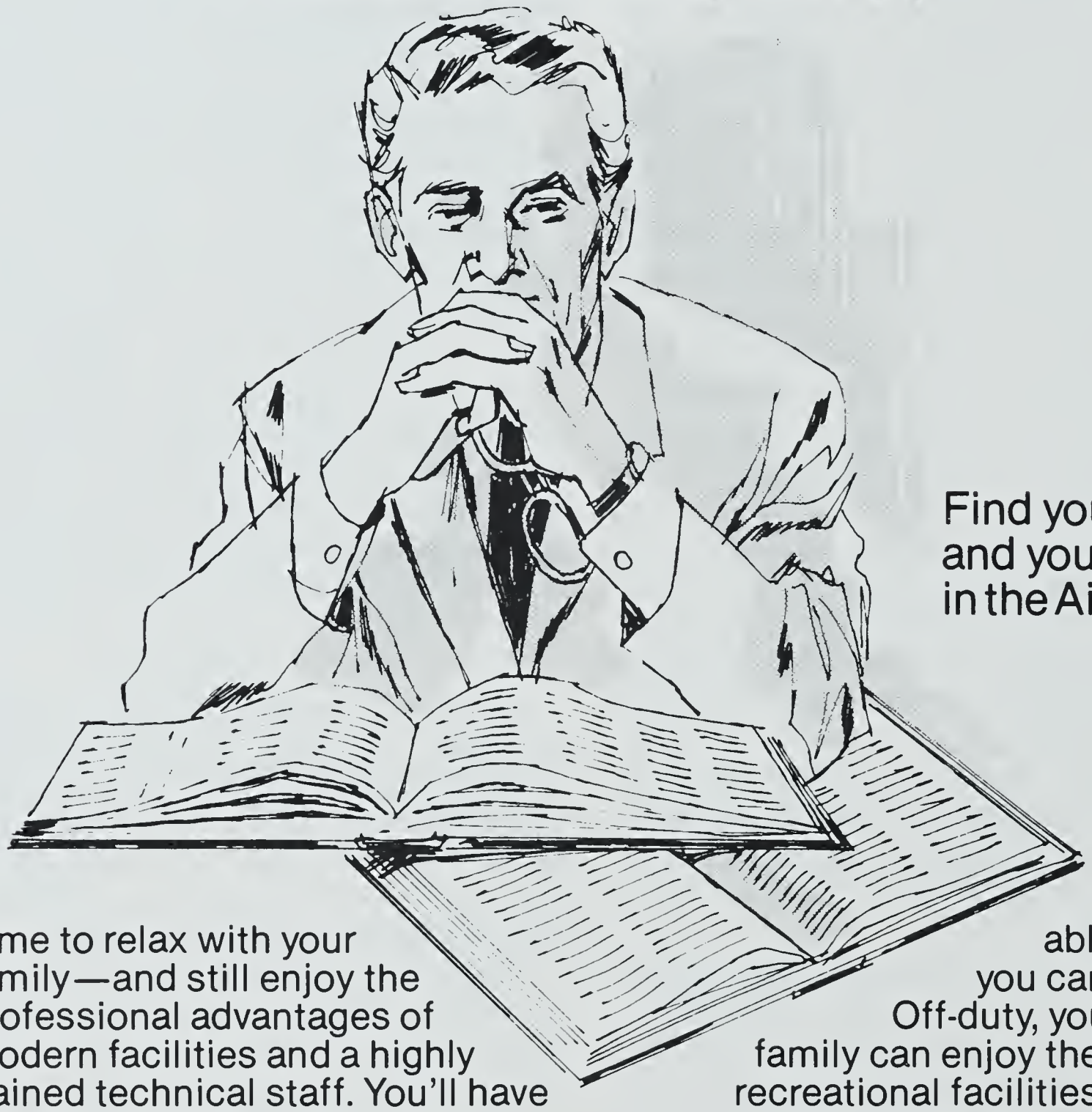
As can be readily appreciated, doctors' situations particularly vis-a-vis retirement planning have been substantially altered. Some incorporated doctors will find themselves unable to fund retirement plans over the next several years, while unincorporated doctors may benefit from the increased contribution limits and plan flexibility to become available in 1984.

Virtually all incorporated doctors should carefully review their situation with competent advisors to determine whether the corporation should be liquidated in 1983 or 1984. Doctors whose retirement plan accounts now total over $100,000 should also be sure to consult their estate planning attorney to determine if a change in their present death plan is called for.

While it will be sometime before the dust settles, physicians should be generally aware of the new tax law provisions and begin planning to reorient their practices and finances with a view to the now changed tax law environment. ⊡

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Patient Access to Physician Medical Records: The Doctor's Responsibility

Wendell R. Morgan
General Counsel, MASA

As the recipient of a substantial number of complaints concerning physicians that flow into the Medical Association, it has been my impression that one of the most frequently voiced complaints (second only perhaps to the charging of excessive fees) concerns the failure of the doctor to forward medical records either to the patient or to another physician. One of the more frequent variations on this complaint is that the physician has refused to forward the medical records until the outstanding bill for services is satisfied.

In the brief space I have allotted here I hope to demonstrate the importance to the physician, both from an ethical and legal standpoint, of prompt compliance with a request for medical information concerning a present or former patient.

It should be noted initially that there is little law, either statutory or case law, which addresses the questions of ownership and access to the physician's medical records. It can, however, be safely asserted that the actual physical record maintained by the physician during the course of treatment of his patient is the sole and exclusive property of the physician, subject however, to the right of the patient to have access to information on his medical condition and treatment.

The *Current Opinions* of the Judicial Council of the American Medical Association are specific concerning the obligation of the physician to forward medical information on the request of another physician presently treating that patient. Likewise the opinions require that a physician provide a copy or a summary of the medical record on request to the patient or to another physician, attorney, or other person designated by the patient. In all cases, however, the release of any patient information must be conditioned upon the receipt of an authorization signed by the patient.

Other than avoiding the anger of an outraged former patient and the possibility of dealing with a complaint to the local county medical society, are there more practical and pressing reasons for promptly complying with requests to furnish medical information? It is my belief that there exists the distinct possibility that failure on the part of the physician to comply with this ethically prescribed duty could result in significant and substantial personal liability.

Alabama does not now have a statute imposing any duty upon a physician to forward medical records. Similarly, Alabama does not have a statute which imposes a duty on a physician to maintain and preserve his

patients confidential disclosures. The Supreme Court of Alabama, however, in 1974 in the case of *Horne vs. Patton,* concluded that, even in the absence of a state creating a physician-patient confidentiality rule, a physician could be liable to his patient for the disclosure of information concerning his patients condition to third parties.

The Court based its decision in part upon the principles of medical ethics as promulgated by the American Medical Association and incorporated this ethical confidentiality rule as a part of the physician-patient contractual relationship. The Court went on to rule that breach of this part of the physician-patient relation would give rise to liability against the physician where the disclosures resulted in damage to the patient.

It is quite easy to visualize a situation wherein the failure to forward medical information to another physician treating your former patient could result in the failure to identify some condition which in turn causes further injury to the patient. It seems quite clear that following the reasoning in *Horne vs. Patton,* liability could attach to a physician who failed to forward medical information under such circumstances, for his breach of the duty imposed by the physician-patient relationship to promptly forward information contained in his medical records.

I have been asked on a number of occasions whether it is always necessary to provide copies of the medical record. While simply providing photostatic copies is the simplist and least expensive method of transmitting the information, the physician may properly choose to provide a summary of the information contained in the medical record.

While the opinions of the Judicial Council do not address this issue, it is my opinion that a physician may properly make a reasonable charge to the patient based on the actual cost of providing the medical records. It is never appropriate, however, to refuse to forward medical information because of an unpaid bill for medical services. See Paragraphs 7.01 and 7.02 *Current Opinions of the Judicial Council 1982.*

One further word of caution. In forwarding medical information to another physician, to an insurance company, or any other third party, never include any information that reflects upon the credit history, record of payment, or existence of unpaid obligations of the patient. This could constitute a serious breach of the Federal Fair Debt Collection Act and could subject the physician to additional penalties or liabilities. ⊡

FORWARDING MEDICAL RECORDS

DO'S

1. Reply promptly
2. Copy or summarize the complete *medical* record
3. Base any charge only on the actual cost to prepare and mail
4. Require patient authorization which is signed and dated

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2. Include *any* credit or billing information
3. Give records or reports to 3rd parties unless authorized by patient

SIXTH ANNUAL
MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
WASHINGTON MEETING
WITH CONGRESSIONAL DELEGATION

SATURDAY, FEBRUARY 19-SUNDAY, FEBRUARY 20, 1983
L'ENFANT PLAZA HOTEL
WASHINGTON, D.C.



SCHEDULE OF EVENTS

Saturday, February 19:

3:00 PM	Check-In
7:00-8:00 PM	Cocktail Reception with Congressional Delegation (Ballroom Foyer)
8:00 PM	Dinner (Ballroom A & B)

Sunday, February 20:

Free time for sightseeing

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Indications: Prophylactic or therapeutic nutritional supplementation in physiologically stressful conditions, including conditions causing depletion, or reduced absorption or bioavailability of essential vitamins and minerals; certain conditions resulting from severe B-vitamin or ascorbic acid deficiency; or conditions resulting in increased needs for essential vitamins and minerals.
Contraindications: Hypersensitivity to any component.
Warnings: Not for pernicious anemia or other megaloblastic anemias where vitamin B_{12} is deficient. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with vitamin B_{12} deficiency who receive supplemental folic acid and who are inadequately treated with B_{12}.
Precautions: *General:* Certain conditions may require additional nutritional supplementation. During pregnancy, supplementation with vitamin D and calcium may be required. Not intended for treatment of severe specific deficiencies. *Information for the Patient:* Toxic reactions have been reported with injudicious use of certain vitamins and minerals. Urge patients to follow specific dosage instructions. Keep out of reach of children. *Drug and Treatment Interactions:* As little as 5 mg pyridoxine daily can decrease the efficacy of levodopa in the treatment of parkinsonism. Not recommended for patients undergoing such therapy.
Adverse Reactions: Adverse reactions have been reported with specific vitamins and

5,000,000 hospital patients with infections.[4] Many are anorectic and may have a markedly reduced food intake. Supplements are often provided as a prudent measure because the vitamin status of critically ill patients cannot be readily determined.[3]

The incalculable millions on calorie-reduced diets. Patients ingesting 1000 or fewer calories per day could be at high risk because this intake may not supply most nutrients in adequate amounts without supplementation.[5]



minerals, but generally at levels substantially higher than those in Berocca Plus. However, allergic and idiosyncratic reactions are possible at lower levels. Iron, even at the usual recommended levels, has been associated with gastrointestinal intolerance in some patients.

Dosage and Administration: Usual adult dosage: one tablet daily. Not recommended for children. Available on prescription only.

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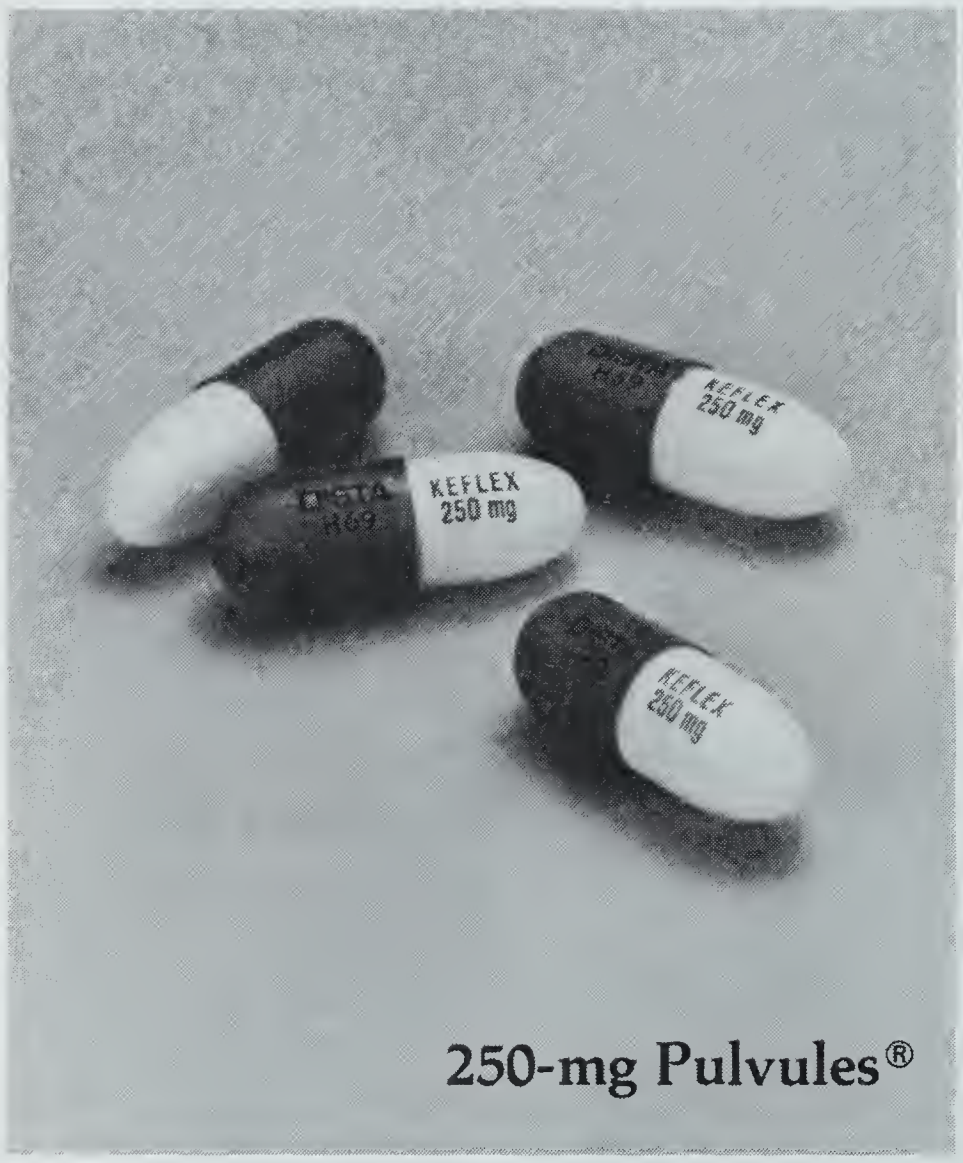
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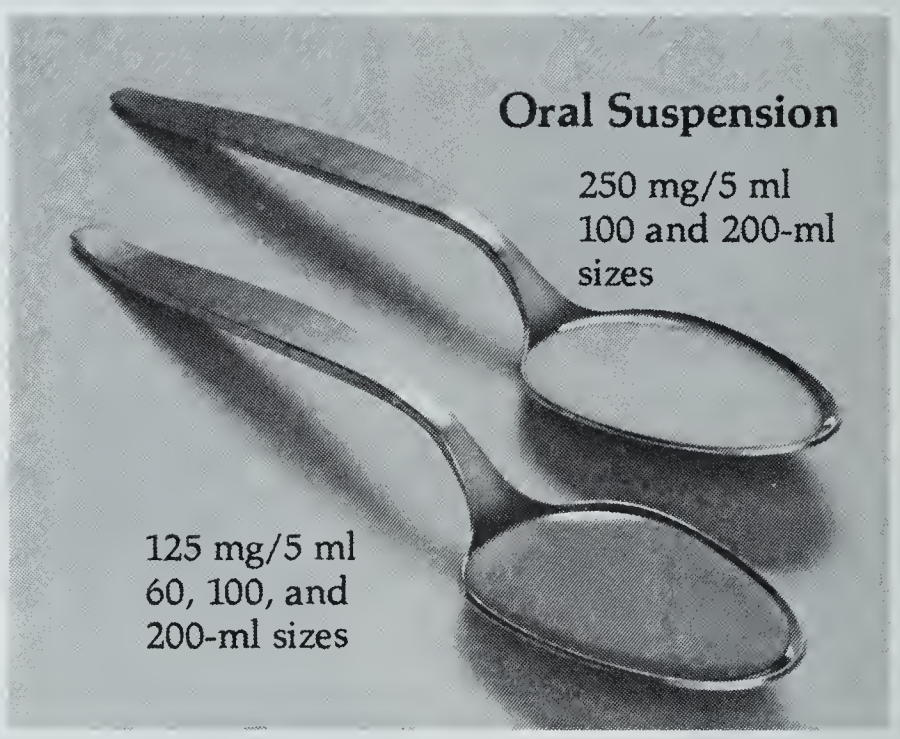
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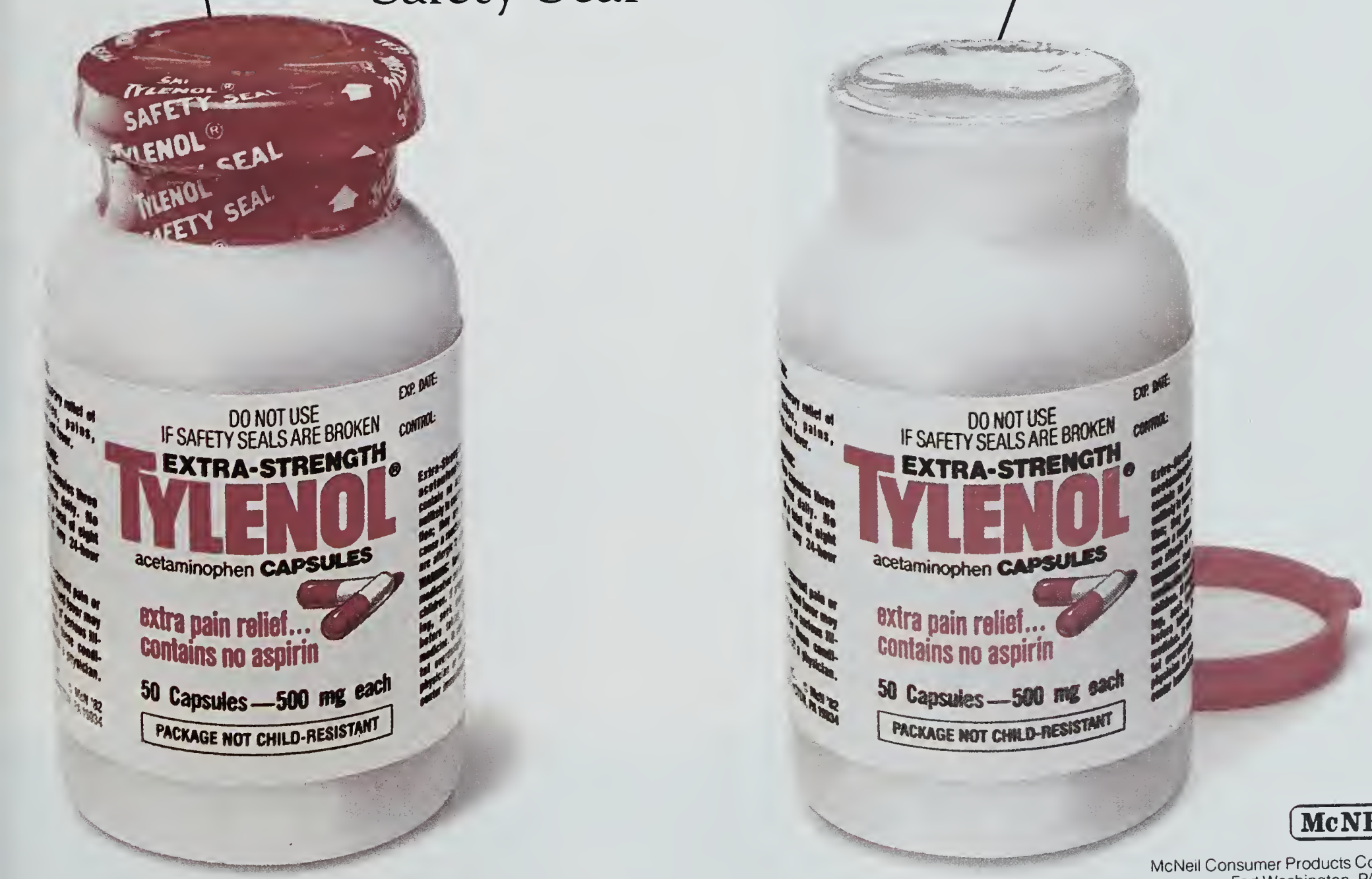
1. Double glue-flap carton to discourage tampering



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2. Plastic Safety Seal® around bottle cap, imprinted with "TYLENOL® Safety Seal"

3. Foil-sealed bottle mouth to help ensure product integrity



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Bactrim™ attacks the
(trimethoprim and sulfamethoxazole/Roche)
in acute exacerbations

Bactrim concentrates in serum and penetrates sputum[1-3]



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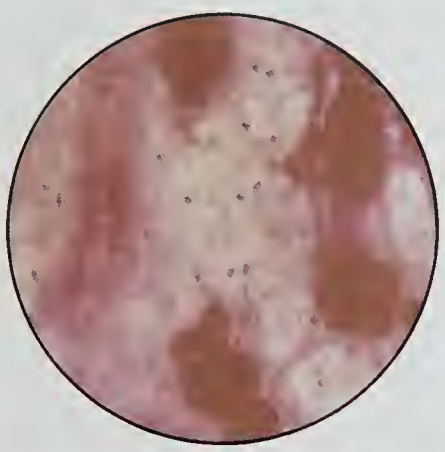
major pathogens of chronic bronchitis*

Bactrim clears sputum of susceptible bacteria

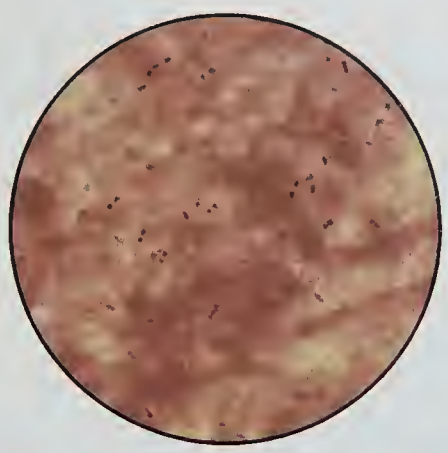
In sputum cultures from patients with acute exacerbations of chronic bronchitis, *H. influenzae* and *S. pneumoniae* are isolated more often than any other pathogens.[4,5] One study of transtracheal aspirates from 76 patients with acute exacerbations found that 80% of the isolates were of these two pathogens.[5]

Bactrim is effective *in vitro* against most strains of both *S. pneumoniae* and *H. influenzae*—even ampicillin-resistant strains. And in acute exacerbations of chronic bronchitis involving these two pathogens, sputum cultures taken seven days after a two-week course of therapy showed that Bactrim eradicated these bacteria in 91% (50 of 55) of the patients treated.[6]

attacks *H. influenzae*—even ampicillin-resistant strains



attacks *S. pneumoniae*



Bactrim reduces coughing and sputum production

In three double-blind comparisons with ampicillin *q.i.d.*, Bactrim DS proved equally effective on all clinical parameters.[7-9] Bactrim reduced the frequency and severity of coughing, reduced the amount of sputum produced and cleared the sputum of purulence.

Bactrim has the added advantages of *b.i.d.* dosage convenience and a lower incidence of diarrhea than with ampicillin, and it is useful in patients allergic to penicillins.

Bactrim also proved more effective than tetracyclines in 10 clinical trials involving nearly 700 patients.[10] Overall clinical condition of the patients, changes in sputum purulence, reduction in sputum volume and microbiological clearance of pathogens—all improved more with Bactrim therapy than with tetracyclines. G.I. side effects occurred in only 7% of patients treated with Bactrim compared with 12% of tetracycline-treated patients. (See Adverse Reactions in summary of product information on next page.)

Bactrim is contraindicated in pregnancy at term and nursing mothers, infants under two months of age, documented megaloblastic anemia due to folate deficiency and hypersensitivity.

Bactrim DS. For acute exacerbations of chronic bronchitis in adults* when it offers an advantage over single-agent antibacterials.

References: 1. Hughes DTD, Bye A, Hodder P: *Adv Antimicrob Antineoplastic Chemother I*/2:1105-1106, 1971. **2.** Jordan GW *et al: Can Med Assoc J 112*:91S-95S, Jun 14, 1975. **3.** Beck H, Pechere JC: *Prog Antimicrob Anticancer Chemother 1*:663-667, 1969. **4.** Quintiliani R: Microbiological and therapeutic considerations in exacerbations of chronic bronchitis, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts;* Princeton Junction, NJ, Communications Media for Education, Inc., 1980, pp. 9-12. **5.** Schreiner A *et al: Infection 6*(2):54-56, 1978. **6.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **7.** Chodosh S: Treatment of acute exacerbations of chronic bronchitis: results of a double-blind crossover clinical trial, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts. Op. cit.*, pp. 15-16. **8.** Chervinsky P: Double-blind clinical comparisons between trimethoprim-sulfamethoxazole (Bactrim™) and ampicillin in the treatment of bronchitic exacerbations. *Ibid.*, pp. 17-18. **9.** Dulfano MJ: Trimethoprim-sulfamethoxazole vs. ampicillin in the treatment of exacerbations of chronic bronchitis. *Ibid.*, pp. 19-20. **10.** Medici TC: Trimethoprim-sulfamethoxazole (Bactrim™) in treating acute exacerbations of chronic bronchitis: summary of European clinical experience. *Ibid.*, pp. 13-14.

Economical b.i.d.

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole/Roche)

*Due to susceptible organisms. **Please see next page for summary of product information.**

Bactrim™

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS:

Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets*, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100; Prescription Paks of 20 and 28. *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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When Doctors Disagree

William L. Smith, M.D.
Editor
Journal of MASA

Dear Doctor Smith:

In response to your call for articles for the *Journal of MASA*, I am enclosing a copy of an article I wrote for a recent *Greenville Advocate* newspaper edition. This article concerns some of the misconceptions the patients have concerning disease and its treatment that I ran across in my office.

I found it interesting that when the article first appeared in the local newspaper, most of my fellow physicians commented that they agreed with all of my points except . . . and they each tried to lobby for their own particular point. I might add that they were always in complete disagreement with each other.

David Guttman, M.D.
Stabler Clinic, P.A.
Greenville, Alabama

It Just Ain't So

Mark Twain is my favorite author. My favorite statement by my favorite author is, "It is not what you don't know that gets you in trouble; it's what you know for sure that just ain't so."

Every day I come across ideas about diseases and remedies "that just ain't so." I'd like to point out a few of these. I don't intend to change any minds, but it will sure make me feel better. Here are some of my favorites:

(1) *"He is sleeping upon all fours so he must have worms."*
Intestinal worms are usually quite benign and rarely cause any symptoms. They sometimes cause some rectal itching or occasionally a stomach ache, but they do not make you sleep upon your knees and elbows.

(2) *"Going out in the wind causes earaches."*
The ear canal is a narrow twisted tunnel and I doubt any wind at all gets inside. Even if it did, the ear drum is a piece of tightly stretched skin creating an airtight seal over the inner ear.

(3) *"If he has a fever, he must need an antibiotic."*
Antibiotics are able to kill bacteria by attacking certain vital parts of their structure or life processes. Viruses are made up entirely differently than bacteria, and antibiotics do not do anything against viruses. It is impossible to distinguish whether or not you have a viral or bacterial infection from fever alone. Most of the time when you have a fever, it is because of a viral infection and so most of the time you do not need an antibiotic.

continued on page 36



SMOKING "CAUSED" IT

Smoking. Chronic Obstructive Pulmonary Disease. And LUFYLLIN. The three are closely related. And the reason is clear. Of all C.O.P.D. cases, 75% to 80% are related to cigarette smoking.[1]

Smoking has another insidious effect. *It alters liver function* by inducing microsomal enzymes. And that's where LUFYLLIN comes in. LUFYLLIN is a bronchodilator with a metabolic advantage for "smoker's disease." *It's no metabolized in the liver.* That's vitally important because altered liver function comes not only with cigarette smoking...but with age, cirrhosis, congestive heart failure and some drug therapy.

All these liver function altering factors may cause serum level fluctuations—something you can avoid with LUFYLLIN. You can also minimize problems with side effects.

That's enhanced control. That's LUFYLLIN.

*Only in Chronic Obstructive Pulmonary Disease with reversible bronchospasm

1. National Interagency Council on Smoking and Health. *The Smoking Digest:* Progress Report on a Nation Kicking the Habit. 1977.

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LUFYLLIN® HELPS CONTROL IT.*
(dyphylline)

A bronchodilator with a metabolic advantage for "smoker's disease."

LUFYLLIN®-400
TABLETS
(dyphylline)

Please see following page for prescribing information.

LUFYLLIN® (dyphylline) Tablets
LUFYLLIN®-400 (dyphylline) Tablets
Before prescribing, please consult full product information, a brief summary of which follows:
Indications: For relief of acute bronchial asthma and for reversible bronchospasm associated with chronic bronchitis and emphysema.
Contraindications: Hypersensitivity; use with other xanthines.
Warnings: Status asthmaticus is a medical emergency. Excessive doses may be expected to be toxic.
Usage in Pregnancy: Safe use in pregnancy has not been established; do not use in pregnant women unless the potential benefits outweigh the possible hazards.
Precautions: Use with caution in patients with severe cardiac disease, hypertension, hyperthyroidism, acute myocardial injury, congestive heart failure, or peptic ulcer. Chronic high dosage is usually associated with gastrointestinal irritation.
Adverse Reactions:
Gastrointestinal—irritation, nausea, vomiting, epigastric pain, headache, hematemesis, diarrhea.
Central Nervous System—stimulation, irritability, restlessness, insomnia, reflex hyperexcitability, muscle twitching, clonic and tonic generalized convulsions, agitation.
Cardiovascular—palpitation, tachycardia, extrasystoles, flushing, marked hypotension, and circulatory failure.
Respiratory—tachypnea, respiratory arrest.
Renal—albuminuria, increased excretion of renal tubule and red blood cells.
Others—fever, dehydration.
Overdosage:
Symptoms—In infants and small children: agitation, headache, hyperreflexia, fasciculations, and clonic and tonic convulsions. In adults: nervousness, nausea, vomiting, tachycardia, and extrasystoles.
Therapy—No specific treatment. Discontinue drug immediately. Provide supportive treatment as indicated. Ipecac syrup for oral ingestion. Avoid sympathomimetics. Sedatives such as short-acting barbiturates help control CNS stimulation. Restore the acid-base balance with lactate or bicarbonate.
Drug Interactions: Toxic synergism with sympathomimetic bronchodilators may occur.
Dosage and Administration:
Usual Adult Dosage—15 mg/kg every 6 hours, up to four times a day. Titrate the dosage individually.
How Supplied:
LUFYLLIN Tablets: (Each white, rectangular, monogrammed tablet contains 200 mg dyphylline):
NDC 0037-0521-92, bottle of 100.
NDC 0037-0521-97, bottle of 1000.
NDC 0037-0521-85, box of 100 unit-dose individually film-sealed tablets.
LUFYLLIN-400 Tablets: (Each white, capsule-shaped, monogrammed tablet contains 400 mg dyphylline):
NDC 0037-0731-92, bottle of 100.
NDC 0037-0731-97, bottle of 1000.
NDC 0037-0731-85, box of 100 unit-dose individually film-sealed tablets.
Caution: Federal (U.S.A.) law prohibits dispensing without prescription.
REV. 7/80
A7368 March, 1981
WALLACE LABORATORIES
Division of CARTER-WALLACE, INC.
Cranbury, New Jersey 08512

continued from page 33

(4) *"A child needs white high top shoes when he starts walking."*
The support for walking comes from bones, muscles and ligaments inside the ankle. In most instances, no special support outside the ankle is needed. Orthopedic corrective shoes, prescribed by your doctor, may be necessary to correct specific problems of the feet and ankles, but normal feet do not need them. There is nothing wrong with wearing expensive, high top shoes, but it is no better for your child than an expensive shirt is better than a cheap shirt. There is also nothing wrong with going barefoot.

(5) *"Aspirin and Tylenol break up congestion."*
These two drugs work against the fever and pain and sometimes inflammation, but they do nothing to relieve stuffy noses and coughing.

(6) *"My child is hyperactive."*
When carefully examined by a neurologist, approximately 95% of those youngsters branded as "hyperactive" were found to be very bright, very bored, active and healthy kids. Labeling your child as hyperactive can do a lot of psychological damage and can postpone or prevent the type of support and help your child really needs.

(7) *"Drink plenty of fluids."*
With a possible exception of disorder of the kidneys and bladder there is no evidence that excessive quantities of liquids help any medical conditions. These large amounts of fluids taken in usually cause an increase in the amount of urine produced. They may be a good source of calories when the patient cannot eat solids, but by themselves, fluids will not cure anything.

(8) *"My child is allergic to Enfamil, so I switched him to Similac."*
I'll tell you a secret about formulas: Enfamil, Similac and SMA are all made from cow's milk; Nursoy, Prosobee and Isomil are all made from soybean protein. You can't be allergic to one of the cow's milk formula's and not the others made from cow's milk. You may need to switch from a cow's milk to a soybean formula, but switching from one brand to another has no effect. All of these formulas and whole milk contain twenty calories per ounce and one is not more fattening than the other.

Now that many of your favorite medical myths have been destroyed, what have you left to believe in? Believe in Mark Twain. After all, he did say, "A man who takes his wife fishing is defeating the purpose."

DAVID GUTTMAN, M.D.
Pediatrician

Percutaneous Cholecystostomy: A Case Report

George L. Beale, Sr., M.D., F.A.C.S.

O. E., an 82-year-old widowed white female was admitted to Clay County Hospital on the 11th of October 1982. The patient had had for several days upper abdominal distress and poor appetite. She had a temperature of 102.4F and acute right upper quadrant pain. When seen by me in surgical consultation about 1:00 p.m. on October 12, 1982, the patient was obviously in early septic shock. She was cyanotic, had a fast pulse, acute abdominal pain worse in the right upper quadrant, where a 10cc mass could be palpated. PAO2 was 36.4, WBC 21,400 with 91% polys. Resuscitative efforts including salem tube, nasal oxygen, Mandol 2 grams every six hours intravenously and Garamycin 80 mgm intra-muscularly and 60 mgm every eight hours with appropriate intravenous fluids. Patient was placed in CCU. Blood gases at 5:25 p.m. revealed an improvement of the PAO2 to 62.8. Temperature went to 105 and then began to drop and by October 13 her temperature became normal. The patient was much improved and her color was good. The sonogram revealed a dilated gallbladder with echo effects consistent with sludge; there were no dilated bile ducts. Due to the patient's critical condition it was felt that she could not withstand surgery and an attempt would be made to carry her conservatively. By October 15, the patient was obviously sicker and it appeared unlikely that she could withstand major surgery such as formal cholecystotomy. A repeat sonogram of the gallbladder revealed rupture with abscess near the rupture and showed that there was no bowel interposed between the skin and the ruptured gallbladder. A consultant thought that as little as possible should be done to this patient. Therefore, a percutaneous cholecystostomy was performed using an Ingram three way suprapubic catheter with trocar (Argyle). Local anesthesia using 4 or 5 cc. of 2% xylocaine was used. A 19 gauge spinal needle with 10cc. syringe was used to aspirate pus from the area to determine the point at which to insert the catheter. After insertion of the catheter, it was inflated with several cc's of Saline and anchored in place with 4 sutures of 2-0 silk and then a sterile dressing was applied. Culture of the pus was obtained and grew out Klebsiella pneumoniae. The catheter was attached to a bile drainage bag and in the first hour or so approximately 275cc. of pus drained into the bag, after which there was very little drainage from the bag over the next few days and tiny black gallstones would appear in the bag each day, from 10 to 20 in number. The patient's improvement after insertion of the catheter was dramatic. She was less toxic, had less pain and was more cooperative. On October 18, 1982, she was removed from CCU, and continued on Mandol intravenously and Garamycin 60mgm. twice daily. Garamycin was omitted on October 19 and the Mandol was omitted on October 20. Cholecystograms through the drainage tube were performed on October 18 and these were repeated on October 25. Each showed good outline of the gallbladder with retained stones within the gallbladder and blocked cystic duct. The patient was transferred with drainage tube in place back to the nursing home on October 27, 1982, and will be followed with further cholecystograms. On transfer she was ambulatory, free of fever and eating a regular diet.

Discussion: An elderly female well beyond the 72-hour "safe period" of early cholecystectomy became shocky and rupture of her gallbladder was demonstrated by sonography. It was felt she would not likely survive conventional cholecystectomy or cholecystotomy. Percutaneous cholecystostomy with an Argyle suprapubic catheter was easily performed and dramatically relieved her.

It is suggested that the insertion technique should include (1) marking the palpable GB mass on the skin, (2) personally viewing the relationship of this marking on the skin to the sonographic location of the GB, (3) the ascertaining by sonography that no bowel is interposed, and (4) aspiration of bile or pus with a slender needle prior to inserting the trocar catheter. ⊡

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Stress — We Are All Victims



Mrs. Patty Estock
President, A-MASA

The A.M.A. Auxiliary in its Shape Up For Life campaign published a pamphlet *Managing Stress*. The basis of the pamphlet is an article by Robert S. Eliot, M.D., published in the May 1981 issue of *Facets,* a publication of the Auxiliary. Dr. Eliot is chairman of the Department of Preventive and Stress Medicine and director of the Cardiovascular Center of the University of Nebraska's Medical Center.

Stress, according to Dr. Eliot, is both friend and foe. Properly used, it is essential to a life of elan and vitality. But like the strings of a violin — too loose, and you won't like the music; too tight, and they might break.

A great deal has been written about stress in recent years. It's been the subject of studies and medical research, papers and books. And many medical experts think stress will be the disease of the 80s. Why?

A study by the U.S. Dept. of Health and Human Services found that 85% of Americans feel "they need less stress in their lives." The government report noted that "Stress can function as a precipitator of illness, as a pre-disposing factor in illness, or as a sustaining factor in chronic disease."

Stress may be related to the country's No. 1 killer, coronary heart disease. In 1981, coronary heart disease will kill more than one million Americans, half of whom will die suddenly within 24 hours. Stress is the culprit in many of these deaths, which increasingly are hitting relatively young men and women.

Almost three-fourths of all patient visits to family physicians and internists are related to unrelieved stress, according to one government study.

Today's woman may be more stressed than man. Not only has women's liberation brought women into new arenas (and new stresses), but many are still expected to remain feminine, motherly, loving, and non-threatening to men. It's too much for many, as health statistics are proving.

Stress on the job is taking a greater toll. Professional people often work under tremendous self-imposed pressures. Non-professionals are making stress management a union issue. Many workers are filing — and winning — stress-related compensation lawsuits.

Everyone is under stress all the time. In fact Hans Selye, M.D., a pioneer in the field of stress management, has written that the only freedom from stress is death. Stress can include such everyday occurrences as worrying about being a good parent, whether a friend is angry, finishing a job on time, having enough money to buy groceries, going to the dentist, a new haircut, a test at school. It may be minor: Did you turn off the stove when you left the house? It may be major: Is my marriage in trouble?

Stress can be present in happy occasions — a job promotion, marriage, vacation — and in unhappy situations — death of a loved one, divorce, injury. It may be due to change — in work hours, residence, schools, sleeping habits, eating habits.

Regardless of its source, Dr. Selye wrote in Stress Without Distress that the body reacts to stress in three stages. First, there is the alarm reaction in which the body recognizes stress and prepares to "fight or flee." Hormones are released which cause changes in the body such as increased heartbeat and respiration, elevated blood sugar levels, increased perspiration. This burst of energy can be used to run from the stress or face it.

This is followed by the stage of resistance, where the body adjusts to the stress and the signs of the alarm reaction disappear. If the stress is not relieved at this point and the body remains alert, the stage of exhaustion is entered. Continued for any amount of time, this stage of exhaustion, where the resistance level to stress is below normal, can bring on maladies such as allergies, acne, alcoholism, hypertension, migraine headaches, heart irregularity or disease, or mental illness such as depression or nervous breakdown.

As Dr. Eliot points out:

"When the body is chronically in an alarm reaction, poised to fight or flee but unable in the modern world to do either, the only hope is to flow. But many people

cannot do it. They remain locked in a state of visceral-vascular readiness for combat or flight — the classic stress response syndrome — but they are unable to spring into action. The body and mind become uncoupled and the price for this eternal vigilance against the threat of 'invisible entrapment,' is the turning on of the body's cholesterol faucets. If prolonged, stress can push cholesterol into the coronary artery walls and the body is softened for the blow stress will later strike — during a rage, perhaps — at the point where the body is weakest.''

Yet stress can be a motivator if used in the right way. In fact, Dr. Eliot advises: ''Make stress your best friend. Use it to build your self-esteem. Sometimes when you're stressed you're not satisfied with yourself. Stress can be a powerful beacon, pointing you toward new heights of self-discovery, self-mastery, and self-fulfillment.''

Many experts feel that we thrive on stress because it makes life more interesting: life would be dull without it. But whether you consider stress friend or foe, you can't have a life completely free of it. The answer is to find ways to manage stress. Here are a few to try.

Learn to flow with problems you can't solve. Most things in life have no emotional content. It's what we make of them that counts. If something — the loss of a tennis game, the promotion of a rival, the loss of a lover — is perceived as a threat, stress enters the body. Yet these are problems that can't be resolved quickly and we only spin our wheels by worrying about them. Sit back, relax, take a break, get some physical activity, talk it over with a friend. Once the stress is reduced, consider an alternative course — like improving the tennis game, working harder at the job, finding a new friend — whatever. Do this no matter how small the problem — waiting in line at the grocery store, being caught in a traffic jam. Don't let the things you can't do anything about produce stress.

Clarify your real values. People who expect too much of themselves get tense if everything doesn't work out the way they plan. Decide what you really want out of life, set practical goals you can reach, and go after them. Success isn't achieving or trying to be something other than what you are. It's valuing yourself and your abilities, deciding what you want to achieve, and achieving it. Are higher pay and the status of a promotion worth the added stress and responsibility? Is owning a home worth the hassle of the mortgage and upkeep? Is proving you're right worth losing a friend? Clarify your values — and establish your life's priorities.

Be a ''cold reactor'' not a ''hot reactor.'' Only you can allow stress to bother you, Dr. Eliot says. Because stress response is largely a learned reaction, it can be unlearned. It's not what you do, but how you do it. And everyone can be a little more ''thick-skinned'' in dealing with problems. Say to yourself, ''This situation won't bother me, because I won't let it bother me.'' Let the person in line at the grocery store cut in ahead of you. Let the car next to you beat you away from the stop light. Let that person have the seat on the bus you've been waiting for for half an hour. Let your friend win the argument once in a while instead of fighting and insisting you're always right. Put the problems into perspective, look to see what matters, then react accordingly.

Communicate with others. If something bothers you, talk about it. Don't bottle up emotions until you overreact to a problem; talk about things before they go too far. Tell people calmly what it is they do that bothers you. It'll be better for you, and nicer for those around you.

Eat right and exercise regularly. Stress can increase your nutritional needs since your body uses food faster. You need a well-balanced diet that includes food from all four food groups — fresh fruits and vegetables; cereals and breads; meats, fish, poultry, eggs; and milk products. Starchy, sugary food eaten under stress may give you a sudden burst of energy, but it won't last long. Regular daily exercise is important, too. Not only will it help you relax and reduce stress, it will help control your weight and maintain good health. Be sure to consult your physician before beginning any exercise program so you'll know how much and what kind is good for you. Then begin a daily and weekly exercise program, for instance, of aerobic dancing.

Take time to smell the roses. In other words, learn to relax. Learn to mix your daily routine with some things you like to do. Just a few minutes of peace and quiet every day can really make a difference. Lie down for 15 minutes. Take up a hobby. Read a favorite book. Whatever you like to do — and it must be something you like — find some way each day to relieve the tensions that build up.

Avoid too many major changes at once. If you have major changes coming up in your life, try to put some space between them. For instance, don't move to a new home on the day you retire from work. Avoid planning major changes together. They can bring on needless stress.

Don't make drugs a substitute for stress management. Excessive use of alcohol, tranquilizers, sedatives, and other drugs can actually add to your stress by affecting your body while only covering up symptoms. While drugs may provide temporary relief from some tensions, they don't usually cure the underlying causes. And remember that any prescription drug should be taken only when and as prescribed by your physician.

It's a fact. Life will never be completely free of stress. The key is to learn to manage it, and make it work for you. ⊡

Patty

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University of South Alabama School of Medicine: The First Decade



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EXECUTIVE DIRECTOR



S. Lon Conner
Executive Director, MASA

Legitimizing the Free Lunch

A major problem in America's mixed economy is that the heavy hand of government can, by imperial edict, direct certain things to happen in a segment that it controls and then ignore the result of that action in a sector it does not control. Case in point:

Congress and HCFA combined in 1982 to direct that hospitals shall receive $5.8 billion less for Medicare and Medicaid than they have been. But hospitals point out that they have already been forced to shift the incurred losses from Medicare/Medicaid to the private sector.

In 1983, according to an Ernst & Whinney accountant speaking at the MASA-cosponsored seminar in Birmingham on the effects of TEFRA, Alabama hospitals stand to lose $36 million in Medicare reimbursements alone.

How much more of the burden can the private sector absorb before it bites the dust? The plain truth is that the "private sector" is not some infinite source of cost-shifted revenues but is itself strapped. What is the "private sector"?

According to a Jefferson County Medical Society study on hospital reimbursement in Alabama, it breaks down this way by payment sources in this state: Medicare, 42.5%; Blue Cross, 30%; Commercial insurors, 9%; Medicaid, 8%; Indigent or Bad Debt, 6%; Private Pay, 4.5%.

The public portion of this is Medicare/Medicaid with slightly more than half, plus indigents, or about 56%; the private sector is the rest, or about 44%.

The private sector means individuals and corporations, which were already complaining of the ever-increasing premiums and hospital bills, a considerable portion of which has been the cost shifted from the shortfall in Medicare/Medicaid, a shortfall that is to be increased by a whopping $5.8 billion under PL 97-248.

President Reagan has repeatedly called for "voluntarism" in the private sector to make up the difference between declining government largesse and public needs. Fine idea, most of us will agree, but Congress and HCFA, in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) have taken his philosophy of charity and carried it to an absurd length, making voluntarism compulsory.

That is what TEFRA does in shifting more costs to the private sector — it mandates that individuals and employers pay for what the government says it can no longer afford to pay in caring for public patients.

However hard TEFRA tries to legitimize the free lunch, there is still no such thing; somebody has to pick up the tab. John Troy, vice president of Travelers Insurance, speaking for the Health Insurance Association of America, says:

"Since hospitals have an incentive to shift costs instead of cutting costs, we cannot realistically expect them to establish competitive price options for the private sector. . . .

"Many individuals and employers are increasingly frustrated that a large and growing portion of their health care expenses is paying not for their own care — over which they have at least some control — but for care given to public patients."

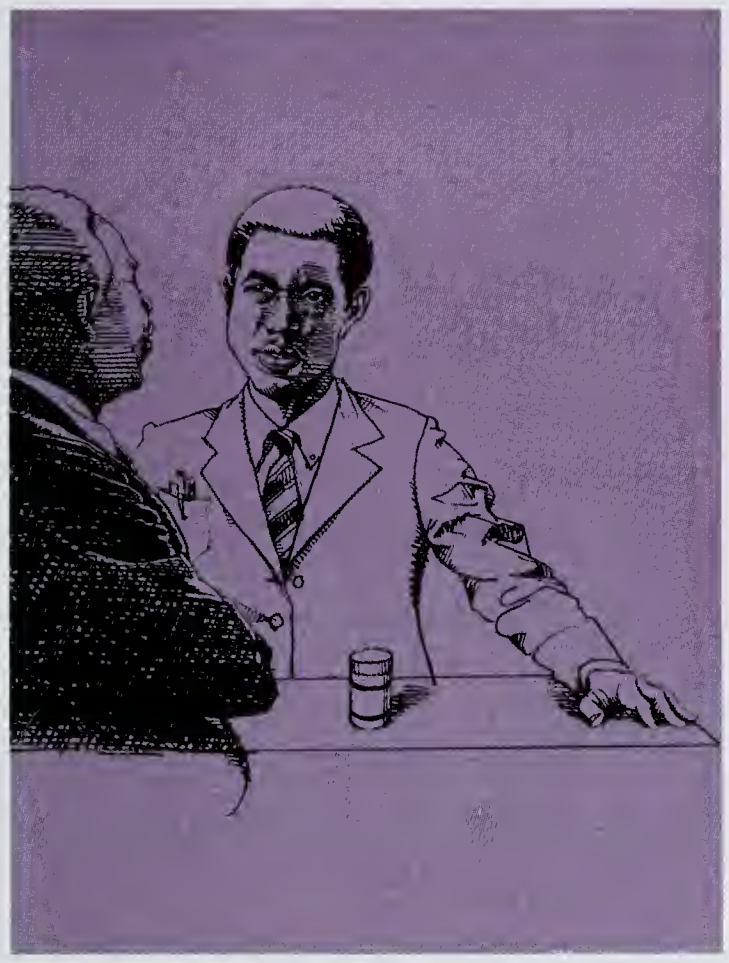
How long will the private sector continue to bear the increasing burden of mandatory charity? That is the question HCFA can't answer and Congress would prefer not to think about. ⊡

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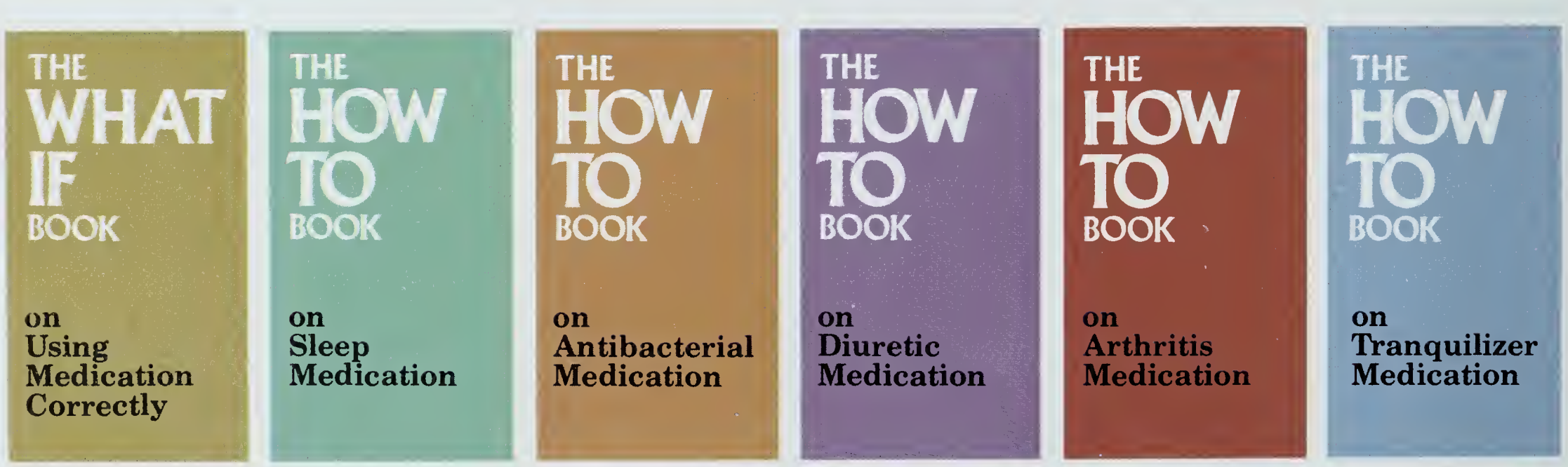
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PRESIDENT'S PAGE



Ronald E. Henderson, M.D.
President, MASA

The Forces Shaping Medical Care

The future direction for medical care in the United States will be determined by five major forces. These entities will act independently and in concert; interact as adversaries as well as allies; and dictate how and where medical care will be delivered and how it will be financed.

Already operational in American society today are:

- Business/Industry Groups
- Hospitals/Hospital Corporations
- The Federal Government
- The Health Insurance Industry
- The Medical Profession

Business and industry will be by far the most powerful force determining the direction of American medicine in the 1980s and beyond. Employers have seen the fallacy of passively paying for medical care in the form of fringe benefits and allocating the administrative responsibility to others. They have beautifully organized their efforts through coalitions, some with medical input, and many operating without effective participation by physicians.

They are now actively and aggressively pursuing such cost containment measures as prepaid care, insisting upon and paying for concurrent utilization review, and are rapidly changing insurance plan designs. Through employee awareness programs, employers are teaching their people how to purchase medical care from providers in an efficient manner. The corporate clout is further being exercised through boards of trustees so that now private employers comprise 40% of the nation's 80,000 hospital trustees. Business/industry groups have founded preferred provider organizations in San Francisco, Denver, Los Angeles and Minneapolis. Other areas under consideration include Houston, Dallas, Evansville, Illinois, and some parts of Florida.

Hospitals and hospital corporations represent the most diverse and fastest growing entity. "For profit" as well as "not for profit" hospitals are aggressively enlarging their scope through the purchase of additional hospitals as well as securing lease management contracts, thereby enlarging their influence and profit potential even further. Proprietary chains now own and manage some 12% of the country's hospitals, and this figure is expected to double in the next ten years.

The change in behavior of these traditional social institutions is most disturbing. Hospitals are hiring primary care physicians and going head to head in direct competition with loyal members of their medical staffs by opening ambulatory care centers as well as bargaining with industry as preferred providers. Hospitals are buying private physicians' practices (this usually includes the real estate plus the patient access) at inflated and difficult to refuse prices. The usual stipulation is that the private practitioner can admit patients to no other hospital and can refer patients only to physicians who use the purchasing hospital (the string around the physician's neck becomes a rope).

The federal government is now paying 43% of the health care bill and will continue to have a rather large voice in medical matters through rules and regulations impacting on Medicare/Medicaid and other federal and state health programs. The Tax Equity and Fiscal Responsibility Act of 1982 made significant changes in the way hospitals and hospital based physicians will be reimbursed under federal programs. Follow-up legislation is probable.

Despite all the recent activity, however, I think the stance of the present administration and probably of the administrations to follow will be that of enhancing competition. With a flat economy and bigger fires to fight, I see the federal government playing a diminishing role in the 1980s.

The health insurance industry will definitely play a diminishing role in the next decade. Its need to exist and function in the health care scheme will be challenged as the business/industry group implements the capability to pay claims and develop the actuarial valid-

continued on page 64

USA College of Medicine

Guest Editor
Clyde G. Huggins, Ph.D.

The College of Medicine, University of South Alabama, is honored and pleased to have the privilege of presenting a special issue of *The Journal of the Medical Association of the State of Alabama* in honor of the Tenth Anniversary of the matriculation of the charter class of medical students in the institution.

The tenth year in the development of the University of South Alabama College of Medicine is an appropriate time to review the achievements of the previous decade, to reassess these in order to gain a perspective of the many developments which have occurred, and to establish priorities of developments yet to be accomplished in a fast-moving process such as the evolution of a medical school.

At this time in the history of the College of Medicine, we have not accumulated musty volumes of historical activity which, on occasion, tend to inhibit enthusiasm and appreciation for the future. Neither does the accumulation of successes, as well as failures over the last 10 years, tend to cloud the future. We look forward with enthusiasm to what must be accomplished in order to develop a medical center of excellence for the Gulf Coast.

The early graduates of the College of Medicine, particularly the charter class, have finished their formal education. They have moved with success through a most demanding educational system, not only in the University of South Alabama Medical Center, but in other medical centers over the world, and they have demonstrated their ability to hold their own and to even excel in those programs.

Many of the early graduates have moved on into the practice of medicine in various communities, not only in Alabama, but in contiguous states and in the nation, and many readers of this special issue will recognize these graduates in their communities.

A college of medicine and a medical center is no better than its graduates; thus, the readers of this special issue may then judge the quality of our educational program as they interact with its graduates.

Even though we are 10 years of age and we have graduated seven classes, we have not fully matured as a college. We continue to strive for excellence in all phases of our educational programs, and the college, under the able leadership of Dr. Stanley E. Crawford, readily and enthusiastically accepts the challenges of the future.

In the next decade medical education faces a myriad of problems, both complex and simple; however, with early recognition of these problems, we are confident that solutions will be found, that the educational programs at the University of South Alabama College of Medicine will continue to maintain high quality, and that the graduates of this institution will continue to move to the various communities in Alabama and become welcome additions to that environment.

As editor of this special issue, I wish to express my appreciation to the members of the editorial committee, namely, Drs. Hollis Wiseman, Robert M. Bucher, John Shackleford and Alan Siegal. In addition, I extend my appreciation to the various authors whose contributions make this special issue a reality.

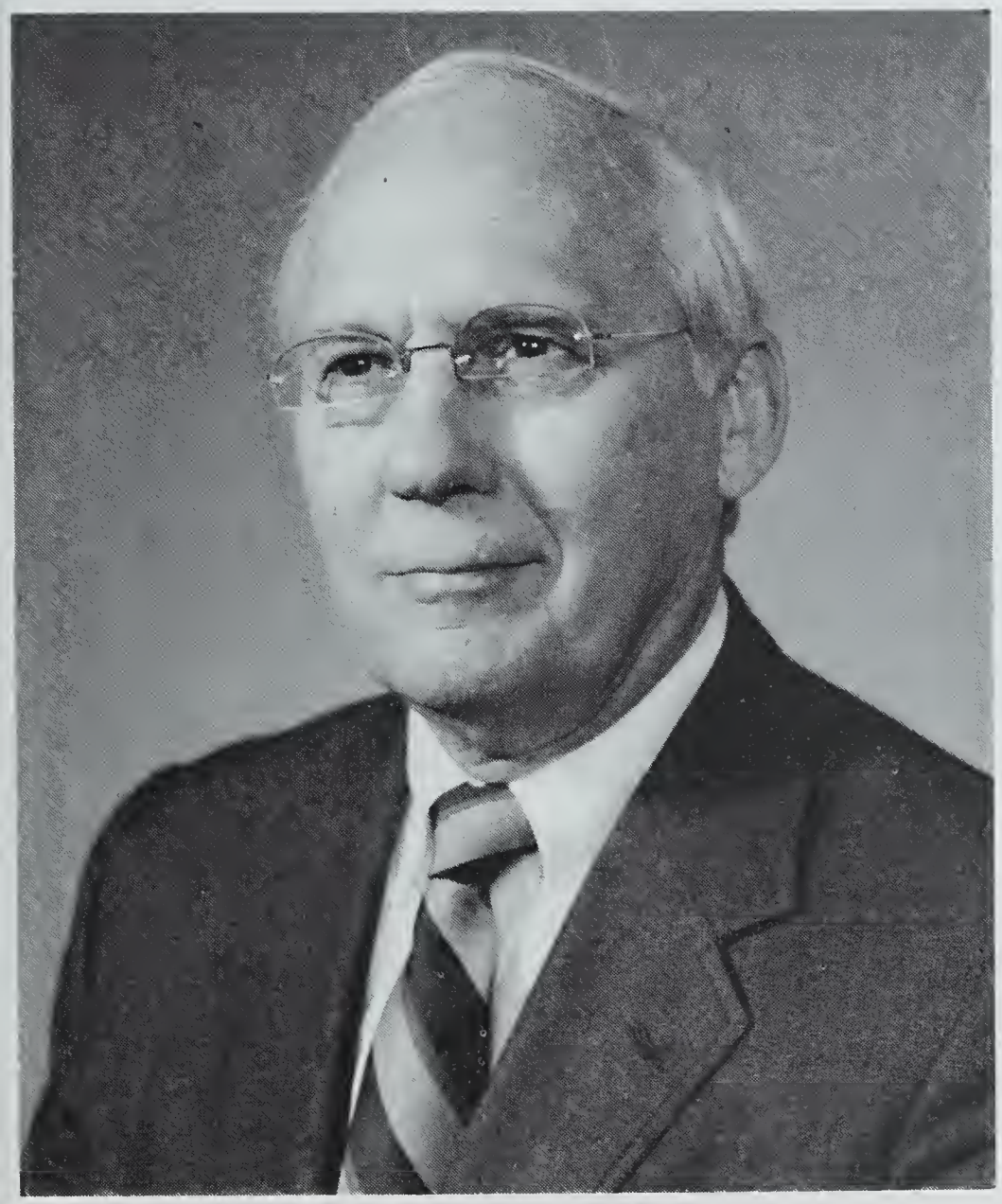
Also, thanks to the editorial staff of the *Journal* of the Medical Association of the State of Alabama, to Carol Ann Jordan with Media Services, USA Medical Center, and to Marilyn Holladay for word processing.

The First Decade

Clyde G. Huggins, Ph.D.
Associate Dean for Academic Affairs

To understand the events of the late 1950s and the early 1960s that preceded the University of South Alabama College of Medicine one needs to put into proper focus the development of the University in Mobile and the evolution of the college, so closely interrelated it is almost impossible to discuss them as separate entities.

In June 1960 Frederick P. Whiddon was appointed the new director of the University of Alabama Extension Center in Mobile. Dr. Whiddon came to the conclusion that an educational vacuum existed in the area, so he set out to fill this vacuum. At that time there were no concrete plans for a separate university in this area. The intention was to expand the University of Alabama Extension Center in Mobile to a four-year degree-granting branch of the university, similar to those already in existence in Huntsville and Birmingham.



DR. HUGGINS

Following several months of activity by the Mobile County Foundation for Public Higher Education, commitments in the form of resources were obtained to construct facilities in west Mobile on real estate obtained from the Mobile County School Board. However, the ability to work with the University of Alabama in sponsoring a four-year degree-granting institution did not come to pass, and as a result of this action the Mobile Legislative Delegation developed a bill to authorize the establishment of a new university in the Mobile area. Following Governor George Wallace's appointment to the Board of Trustees of this new university, Dr. Whiddon was unanimously elected president of the University of South Alabama, a position he still maintains. The University of South Alabama formally opened its doors for students in the fall of 1964 and continues to this day as a vigorous and dynamic force within the southern portion of Alabama.

A university is a necessary precursor of a medical school and at the time the University of South Alabama was formed, planning was initiated for a medical school. The development of the two went hand in hand. The Mobile County Foundation for Public Higher Education, whose officers had been so successful in the establishing of the University, were called upon to lay

the ground work for the medical school. In September 1964 Dr. Vaun Adams, a Mobile pediatrician, was appointed chairman of the subcommittee to conduct a feasibility study for the establishment of the medical school.

In early July 1966, as a result of a visit by consultants, a report concluded that there was indeed a need for a second medical school in Alabama and that Mobile was the logical location. In February 1970 Governor Albert Brewer announced that a medical school would be established at the University and that he would ask that $10 million be appropriated by the legislature to finance construction and operating expenses.

During the next four years much work was carried out by the special medical school committee working not only locally but at the state level as well, which resulted in a legislative resolution in 1967 directing the University of South Alabama to proceed with planning for a medical school.

In 1970 Mobile General Hospital, which was essentially a new building, was deeded to the University of South Alabama with its city and county tax base intact. The College of Medicine was at last off the ground.

As plans for the College of Medicine became formalized, two important committees were created to provide advice to the president. The first was a national committee charged with a search for dean of the college, and the second was composed of members of the Mobile County Medical Society. The latter committee did yeoman service in the early formative stages of the medical school, serving first with Dr. Whiddon and later with Dr. Robert M. Bucher who was appointed dean May 4, 1971.

Organization

Three months after Bucher became dean, he began the monumental task of putting together the ingredients necessary to open the medical school. Many key personnel who committed themselves to the College of



NATIONAL ADVISORY COMMITTEE VISIT UNIVERSITY

The National Presidential Advisory Committee confer with USA President Frederick Whiddon. The committee played an important role in the selection of the dean for the new college of medicine. From the left: Dr. Alton Ochsner of the Ochsner Clinic; Dr. Howard Phillips, vice president for Academic Affairs; USA President Frederick Whiddon; Dr. Michael DeBakey; Senator John Tyson; Dr. Arthur Richardson of Emory University.



GROUNDBREAKING FOR THE MEDICAL SCIENCES BUILDING 1972

Dignitaries gather in May 1972 for groundbreaking of the first building to be constructed for the new USA College of Medicine. From the left: Former Alabama Speaker of the House, Sage Lyons; State Senator Lionel "Red" Noonan; Vice President of the Board of Trustees, Ernest Cleverdon; Cornelia Wallace beside her husband, Governor George Wallace taking the traditional first spadeful; USA President, Frederick P. Whiddon; Dean of the College of Medicine, Dr. Robert M. Bucher; Senator Pierre Pelham, and Senator Roland Cooper.

Medicine came to the campus for planning sessions in 1971 and 1972. During these sessions, the organizational framework in the basic curriculum was formulated.

A Divisional Structure was conceived. There were six divisions in all: 1) Basic Sciences, 2) Growth and Development, 3) Neuroscience, 4) Diagnostic Services, 5) Surgical Services and 6) Medical Services. Disciplinary departments were authorized within each of these divisions with the division chairman functioning in a capacity similar to an assistant or associate dean.

As soon as the original administrative structure had been decided, it became the responsibility of each division chairman to recruit the departmental chairmen and then to work with them in selecting faculty members. This concept permitted the development, planning and recruitment to proceed on a broad front under the supervision of the division head, rather than being the direct responsibility of the dean, who was then free to concentrate on the next level of planning where his expertise was most needed.

Although the Divisional Structure was abolished in 1975, the sharing of responsibility was perhaps one of the most important factors that permitted the USA College of Medicine to move ahead at such a rapid pace, resulting in the charter class of students matriculating in January 1973 rather than in September 1974. It also permitted the rapid evolution of a well-planned curriculum with adequate manpower for the teaching programs for the charter class and for subsequent classes.

In June 1974 Arthur Donovan, who was then chairman of the department of Surgery, was appointed acting dean. He continued in this role until March 1976 at which time Alan Siegal, associate professor in the department of Medicine, was appointed dean of the College of Medicine. He was succeeded by Robert Kreisberg, chairman of the department of Medicine in May 1976. Kreisberg retained his chairmanship while serving as dean.

In late 1975, by common consent of the division chiefs and departmental chairmen, the concept of Divisional Structure was dissolved. As a result, the de-

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Reference: 1. Sheu YS, Ferguson JA, Cooper JR: *Evaluation of the Abuse Liability of Diethylpropion, Phendimetrazine, and Phentermine,* unclassified document, ADAMHA, HHS. Office of Medical and Professional Affairs, NIDA, 1980, pp 10–15.

MELFIAT® 105 UNICELLES®

(phendimetrazine tartrate) 105 mg

Short-term investment for long-term weight control

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Atlanta, Georgia 30318

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Please see brief summary of prescribing information on the next page.

A Brief Summary
MELFIAT® 105 UNICELLES® ©
(phendimetrazine tartrate) 105 mg Slow Release Capsules
INDICATIONS AND USAGE: Melfiat® 105 (phendimetrazine tartrate) is indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class (See CLINICAL PHARMACOLOGY) should be measured against possible risk factors inherent in their use such as those described below.
CONTRAINDICATIONS: Advanced arteriosclerosis, symptomatic cardiovascular disease, moderate to severe hypertension, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors (hypertensive crises may result).
WARNINGS: Tolerance to the anorectic effect usually develops within a few weeks. When this occurs, the recommended dose should be discontinued. Phendimetrazine tartrate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly.
Drug Dependence: Phendimetrazine tartrate is related chemically and pharmacologically to the amphetamines. Amphetamines and related stimulant drugs have been extensively abused, and the possibility of abuse of phendimetrazine tartrate should be kept in mind when evaluating the desirability of including a drug as part of a weight-reduction program. Abuse of amphetamines and related drugs may be associated with intense psychological dependence and severe social dysfunction. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high-dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG, manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxication is psychosis, often clinically indistinguishable from schizophrenia.
USAGE IN PREGNANCY: The safety of phendimetrazine tartrate in pregnancy and lactation has not been established. Therefore, phendimetrazine tartrate should not be taken by women who are or may become pregnant.
USAGE IN CHILDREN: Phendimetrazine tartrate is not recommended for use in children under 12 years of age.
PRECAUTION: Caution is to be exercised in prescribing phendimetrazine tartrate for patients with even mild hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of phendimetrazine tartrate and the concomitant dietary regimen. Phendimetrazine tartrate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage.
ADVERSE REACTIONS: Cardiovascular: Palpitation, tachycardia, elevation of blood pressure.
Central Nervous System: Overstimulation, restlessness, dizziness, insomnia, euphoria, dysphoria, tremor, headache; rarely psychotic episodes at recommended doses.
Gastrointestinal: Dryness of the mouth, unpleasant taste, diarrhea, constipation, other gastrointestinal disturbances.
Allergic: Urticaria.
Endocrine: Impotence, changes in libido.
OVERDOSAGE: Manifestations of acute overdosage with phendimetrazine tartrate include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states.
Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma. Management of acute phendimetrazine tartrate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Acidification of the urine increases phendimetrazine tartrate excretion. Intravenous phentolamine (Regitine) has been suggested for possible acute, severe hypertension, if this complicates phendimetrazine tartrate overdosage.
DOSAGE AND ADMINISTRATION: Since Melfiat® 105 (phendimetrazine tartrate) 105 mg is a slow release dosage form, limit to one slow release capsule in the morning. Melfiat® 105 (phendimetrazine tartrate) is not recommended for use in children under 12 years of age.
HOW SUPPLIED: Each orange and clear slow release capsule contains 105 mg phendimetrazine tartrate in bottles of 100. NDC 0063-1082-06.
CAUTION: Federal law prohibits dispensing without prescription.

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Atlanta, Georgia 30318

partmental chairmen assumed a stronger role in the College of Medicine with a direct line of responsibility to the dean.

Kreisberg remained dean until February 1980 at which time Clyde Huggins became acting dean for five months. Dr. Stanley Crawford was appointed dean of the College of Medicine and vice president for Medical Affairs in June 1980. The organization and structure within the College of Medicine which was set in motion by Kreisberg in May 1976 continues to the present time with only slight modifications.

Subsequent to Kreisberg's appointment as dean in May 1976 several other changes also occurred. Donovan was invited to become vice president for Health Affairs while retaining his chairmanship of Surgery. In addition, three associate deans were appointed with specific administrative responsibilities. Associate Dean for Academic Affairs, Clyde G. Huggins, was in charge of Admissions, Curriculum, Student Affairs and the management of the undergraduate medical program. Associate Dean for Basic Sciences, Charles Baugh, while retaining his post as chairman of the department of Biochemistry, was assigned administrative responsibilities for the basic sciences as well as various support services in the college. Another particularly important mandate to Baugh was to develop the Ph.D. program for the basic sciences department. A third associate dean, Arvin Robinson, chairman of Radiology, was charged with direct participation in the planning and development of the various phases of the college and Medical Center.

The clinical chairmen, composed of the departments of Medicine, Surgery, Pediatrics, Psychiatry, Obstetrics/Gynecology, Family Practice, Anesthesiology, Orthopedics, Neurological Surgery, Medical Genetics and Pathology all report directly to the dean. The basic sciences departments, composed of Anatomy, Biochemistry, Physiology, Pharmacology and Microbiology/Immunology report directly to the associate dean for Basic Sciences. He then responds directly to the dean of the College of Medicine.

The appointment of Stanley Crawford as dean and vice president for Medical Affairs in June 1980 represents the first time since 1974 that the dean did not function as a departmental chairman. Since his coming, the college has benefited with continuous growth, development and stability.

The USA College of Medicine owes much to those individuals who were carrying the role of Dean of the College of Medicine, as well as chairman for their respective departments during those first six years. Without this self-sacrifice, it is difficult to visualize what might have happened as the College of Medicine moved through its first decade.

Faculty

The early years of the first decade of the college were devoted to recruitment of basic science faculty. This

was important because the first two years of medical education were started almost immediately once a few faculty members were here. Credit must be given to those faculty members who cast their lot with a new university and developing college of medicine. One must applaud their zeal and pioneer spirit.

In 1972 the institution had not yet completed its first decade; therefore there was not a proven track record for the University or for the College of Medicine. The faculty that came to the College of Medicine in the early part of the decade were mostly young and inexperienced. To their credit they have developed very well, they are productive professors in their own right, and the College of Medicine is extremely proud of their contributions. Faculty research and scholarly productivity, as well as quality teaching, are the hallmarks of a dynamic institution.

The early organization and structure of the College of Medicine was designed to recruit not only basic science faculty but to recruit clinical faculty as well. This was necessary in order for the clinical faculty to develop adequate resources in the University's hospital and to provide for clinical teaching at an early stage in the first decade. This becomes more important when one considers that a strong residency training program was already in place in the hospital. Initially, the number of residents in the hospital was quite small. With the advent and identification of the clinical chiefs and their recruitment of faculty, a vigorous program for developing the residency training program was begun. In 1970 there were less than 20 full-time residents in the USA Medical Center Hospital. This number grew quickly over the next ten years so that by 1982 there were more than 137 residents.

Students

During the last decade, there have been approximately 500 Alabamians applying to medical school each year. Of that average approximately 50 percent have matriculated in medical schools each year — 64 in the College of Medicine at the University of South Alabama, and as many as 165 in the entering class at the University of Alabama School of Medicine in Birmingham. In addition to these state institutions, 20 to 30 Alabamians elect to attend medical schools in other states.

In each entering class at South Alabama anywhere from 25 to 35 universities and colleges are represented. Most every county out of the 67 counties in the state of Alabama have provided students in the College of Medicine over the last decade.

There were 20 students to graduate in the charter class in June 1976. In June 1982, 61 students graduated, making a grand total of 382 students to have graduated from the College of Medicine during the first ten years. Since many of these graduates are still in training, it is too early to tell where these graduates will practice medicine. However, it is rather axiomatic that physicians tend to practice medicine within 200 miles of where they participate in their graduate medical experiences (internship and residency). Since most of our students have elected to stay in the Southeast and have selected Alabama and the contiguous states for their residency experiences, it is believed that these graduates will be a strong resource for medical care in the state of Alabama.

Residency Programs

It is impossible to discuss the residency programs in the University of South Alabama Medical Center Hospital without taking a brief look at the history and tradition of the programs in the hospital as we know it today.

The Mobile General Hospital, the precursor to the USA Medical Center Hospital is, by virtue of its lineage, one of the oldest hospitals in the United States. In 1830 the original facility was completed and was used for 136 years until occupancy of the new hospital in 1966.

In 1859 the Medical College of Alabama was opened in Mobile and was located just a few blocks from the old hospital. The hospital served as the primary teaching facility for the medical school until the college was moved to Tuscaloosa in 1920. Residency programs at the USA Medical Center Hospital are a direct continuation of programs offered as early as 1880 at the first Medical College of Alabama. Thus, residency programs must have existed before they were listed in the first programs approved at the level of the American Medical Association in 1906.

Approved residency programs are available in the following disciplines: Internal Medicine, General Surgery, Orthopedics, Pediatrics, Pathology, Radiology, Psychiatry, Obstetrics/Gynecology, Neurology and Family Practice. These programs are fully integrated and are under the control of the clinical department chairmen. It is important to note that each year a large number apply for each of these programs and each department selects entering residents. There is no question that the quality of graduate training experiences and opportunities have increased immeasurably.

Accreditation

The College of Medicine was given provisional accreditation status prior to enrollment of the charter class. During following years annual reports and site visits permitted the College of Medicine to become a fully accredited institution simultaneously with the graduation of the charter class of medical students in June 1976. Since full accreditation, the college has been site visited for accreditation several times. Our last accreditation visit was January 1981. The next is planned for December 1983.



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See next page for brief summary of prescribing information.

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Dental pain and episiotomy pain are predictable, reproducible "standards" that make possible objective comparisons of effectiveness of different analgesic agents.

- Measured against 15, 30 and 60 mg doses of codeine phosphate in a double-blind study of 287 patients, 400-mg doses of ibuprofen proved "significantly better than codeine on almost all pain intensity, degree of relief and duration of analgesia parameters."[2]
- Measured against a propoxyphene-acetaminophen combination for pain relief after 3rd molar extractions, ibuprofen proved equally effective and caused fewer side effects. Ibuprofen was associated with faster recovery, evidenced by more rapid reduction of trismus and return to normal function.[3]
- Measured against post-episiotomy pain in 30 patients, "ibuprofen was effective in treating the swelling as well as pain...during the first and worst days. Therefore, it is not only the analgesic but also the anti-inflammatory effect of ibuprofen that are the beneficial factors..."[4]

Measure RUFEN® (ibuprofen) against any mild to moderate pain

RUFEN	Acetaminophen + codeine combinations
• single-entity, peripheral-acting analgesia	• combined drugs act partly through central opioid pathways
• powerful treatment of both pain and inflammation	• virtually no treatment of the inflammatory component
• better tolerated than aspirin	• combined side effects of two drugs—warning required about driving or operating machinery; possible respiratory depression with alcohol, tranquilizers, other common medications
• no narcotic risk, red tape, records	• narcotic precautions required
• matchless economy in a modern NSAID	

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And Rufen® Measures Up Best

RUFEN® (ibuprofen) Tablets

INDICATIONS AND USAGE: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in the long-term management of these diseases. Safety and effectiveness have not been established for Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain. Treatment of primary dysmenorrhea.

CONTRAINDICATIONS: Patients hypersensitive to ibuprofen, or with the syndrome of nasal polyps, angio-edema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory drugs (see WARNINGS).

WARNINGS: Anaphylactoid reactions have occurred in patients hypersensitive to aspirin (see CONTRAINDICATIONS). Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration, perforation, or gastrointestinal bleeding can end fatally, however, an association has not been established. Rufen should be given under close supervision to patients with a history of upper gastrointestinal tract disease, and only after consulting the ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be attempted. If Rufen must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

PRECAUTIONS: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If developed, discontinue Rufen and administer an ophthalmologic examination.

Fluid retention and edema have been associated with Rufen; caution should be used in patients with a history of cardiac decompensation.

Rufen can inhibit platelet aggregation and prolong bleeding time. Use with caution in patients with intrinsic coagulation defects and those taking anticoagulants.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy, this therapy should be tapered slowly when adding Rufen.

DRUG INTERACTION: *Coumarin-type anticoagulants.* The physician should be cautious when administering Rufen to patients on anticoagulants.

Aspirin. Concomitant use may decrease Rufen blood levels.

PREGNANCY AND NURSING MOTHERS: Rufen should not be taken during pregnancy nor by nursing mothers.

ADVERSE REACTIONS: Incidence greater than 1%. Gastrointestinal: The most frequent adverse reaction is gastrointestinal (4 to 16%). Includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of GI tract (bloating and flatulence). Central Nervous System: dizziness*, headache, nervousness. Dermatologic: rash* (including maculopapular type), pruritus. Special Senses: tinnitus. Metabolic: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS). *Incidence 3% to 9%.

Incidence less than 1 in 100. Gastrointestinal: gastric or duodenal ulcer with bleeding and/or perforation, hemorrhage, melena. Central Nervous System: depression, insomnia, confusion, emotional lability, somnolence, aseptic meningitis with fever and coma. Dermatologic: vesiculobullous eruptions, urticaria, erythema multiforme, Stevens-Johnson syndrome and alopecia. *Special Senses:* hearing loss, amblyopia (blurred and/or diminished vision, scotomata and/or changes in color vision) [see PRECAUTIONS]. Hematologic: neutropenia, agranulocytosis, aplastic anemia, hemolytic anemia (sometimes Coombs' positive), thrombocytopenia with or without purpura eosinophilia, decreases in hemoglobin and hematocrit. Cardiovascular: congestive heart failure in patients with marginal cardiac function, elevated blood pressure. Allergic: syndrome of abdominal pain, fever, chills, nausea and vomiting, anaphylaxis, bronchospasms (see CONTRAINDICATIONS). Renal: acute renal failure in patients with preexisting significantly impaired renal function, decreased creatinine clearance, polyuria, azotemia, cystitis, hematuria. Miscellaneous: dry eyes and mouth, gingival ulcers, rhinitis.

Causal relationship unknown. Gastrointestinal: pancreatitis. Central Nervous System: paresthesias, hallucinations, dream abnormalities, pseudotumor cerebri. Dermatologic: toxic epidermal necrolysis, photoallergic skin reactions. Special Senses: conjunctivitis, diplopia, optic neuritis. Hematologic: bleeding episodes. Allergic: serum sickness, lupus erythematosus syndrome, Henoch-Schonlein vasculitis. Endocrine: gynecomastia, hypoglycemia. Cardiovascular: arrhythmias (sinus tachycardia, bradycardia, and palpitations). Renal: renal papillary necrosis.

OVERDOSAGE: Acute overdosage, the stomach should be emptied. Rufen is acidic and excreted in the urine, alkaline diuresis may benefit.

DOSAGE AND ADMINISTRATION: Rheumatoid arthritis and osteoarthritis, including flareups of chronic disease: Suggested dosage 400 mg t.i.d. or q.i.d.

Dysmenorrhea: 400 mg every 4 hours as necessary.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for the relief of pain. *Do not exceed 2,400 mg per day.*

CAUTION: Federal law prohibits dispensing without prescription.

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The University of South Alabama Medical Center and Hospital

The history of the Mobile General Hospital, now known as the University of South Alabama Medical Center Hospital, has been one of hardship, adversities and frustrations. In spite of many problems the hospital has grown to be so complete that today it serves the total community and Gulf Coast area as the Southwest Alabama Regional Referral Center.

When the old Mobile General Hospital was vacated and the staff moved to the new hospital in 1966 they transferred 61 patients, only one of which was a private patient. The hospital board of the Mobile General, which had planned the new facility, was visionary in that the building was constructed for 500 beds. Three-hundred were completed when the facility became operative. As soon as the College of Medicine began its development, it was obvious that additional beds would be essential to accommodate the teaching programs for at least 64 students. As a result, two floors were then developed in such a way as to create an additional 75 beds.

In 1970, by agreement with the Mobile County Hospital Board, the University of South Alabama essentially agreed for a three-mill ad valorem tax to provide medical treatment and care for the indigent patients residing in Mobile County to the extent that these funds permit. It also agreed to continue the graduate medical program in accordance with all standards prescribed by review committees for residency training. In patient-care-dollars, the hospital budget is now $43 million per year and employs 1,200 people in support of this mission. The hospital now receives only two percent of its budget from the county. The College of Medicine and the University of South Alabama are committed to cover some indigent care in the interest of the community and in support of our educational programs. However, we are now attempting to provide 38 percent of the total care to indigent patients and therefore, a crisis is near. Our indigent care costs must receive more support or, painfully, we will be forced to place further limits on services available.

The role of the University of South Alabama Medical Center Hospital has always been one of concern for the area citizens. This concern must be reciprocal. Its presence aids those citizens who require medical help and it serves as an educational institution not only for residents, but for undergraduate medical students, for nurses, for medical technologists and a broad mix of allied health personnel. Not the least in importance is the continuing medical education it provides for area physicians.

The University of South Alabama has had an important financial impact on the economy of this region. In terms of yearly income to citizens of this region, South Alabama, when combined with the Mobile County Public School System, serves as a primary employer for the whole metropolitan area of Mobile. As a resource to the community it is not ignored. The community is very supportive, not only to the nearly 10,000 students, but also to the large influx of faculty in the college and the University. The large number of physicians who have moved to the community as a result of the college is a medical resource of the highest order. The presence of the College of Medicine and the University of South Alabama have many implications in the form of special programs staffed by faculty members. The first decade has seen the college develop into a quality institution as it has interacted with the University, with the community in general, and with the medical profession at the metropolitan level. ⊡



MEDICAL SCIENCES BUILDING DEDICATION

Governor George Wallace shakes the hand of John Tyson, Jr., president of the University of South Alabama Student Government Association during dedication ceremonies in 1973 for the new Medical Sciences Building. University President, Dr. Frederick Whiddon looks on.

The Charter Class Remembered

Fred Strickland, M.D.
J. F. ''Peck'' Garner, II, M.D.

This year marks the Tenth Anniversary of the entry of the Charter Class of the University of South Alabama College of Medicine. We remember clearly that January day when 24 men and one woman gathered together. Our initial impression was that we did not have even a remote resemblance to physicians. The reassuring words of a few of the skeleton faculty, most notably Sid Huggins and Robert Bucher, convinced us that we were all destined to greatness.

Ten years later the first days of the University of South Alabama College of Medicine remain vivid in our memories but we find it difficult now as then, to know which aspects of the experience were typical of medical schools everywhere and which were uniquely due to the special situation.

Probably most medical students greet their first day much as we did, with a mixture of excitement, determination and apprehension, with many covert glances of mutual evaluation exchanged with classmates-to-be and with an impatience to be done with ceremony and started with the instruction. However, it is believed that few students' first days were attended with such a sense of history-in-the-making as was ours.

The 25 students and handful of faculty seemed nearly lost amid the crowd of dignitaries and well-wishers who gathered in the Life Sciences Building Auditorium on that third day of January 1973. Speech after speech stressed the milestone nature of the day, some recalling the history of medical education in Mobile and others looking forward to a bright future ahead while the television cameras in attendance lent that special sense of event that comes when one knows that the scene unfolding before one's own eyes will later be replayed in thousands of living rooms. None of the Charter Class had imagined as they presented themselves for that first meeting that they would find themselves the subject of media attention (''Let's get a picture,'' said the photographer. ''And what led you to apply to medical school?,'' inquired the reporter.), but it was here that the point first began to emerge that for all of us at the school, students, faculty and administration alike, every move would be, could not help but be, the setting of a precedent. It was with a sober sense of many eyes upon us that we left that first gathering.

There was in all this a danger of feeling self-important, for which the first afternoon provided an antidote. We were welcomed to our orientation to the hospital by a professor of pathology who, surveying our 25 eager faces, spoke a few words about the importance of inference in clinical practice. By way of illustration, he observed that he could infer that we were all ''Pretty smart, but not real smart.'' This caused some consternation in the ranks, so he quickly explained: ''You see, I know you have to be pretty smart to be admitted to medical school, and not real smart to want to be.'' We soon discovered what he meant.

Personal experiences with the medical school began, however, somewhat earlier for two members of the Charter Class both of whom were taking undergraduate classes at USA in the six months prior to January 1973. They were asked if they would be interested in accompanying one of the faculty, T. G. Sarphie, on a trip to the University of Florida to pick up the six cadavers for the first class of gross anatomy. Both jumped at the chance to function as ''real medical students.'' When George and Peck showed up outside the Life Sciences Building the following Saturday they were met by a jovial character not much older than they, with a rented white Econoline van, and they knew they were in for an unusual weekend. The escapades of that weekend would probably fill a book; some of the events are still known only to the three of them (to protect the guilty).

Probably the most humorous moment of the weekend was on Highway 90 outside of DeFuniak Springs, Florida, when the clutch linkage snapped. In a blinding rainstorm, with six cadavers in plastic bags in the back of the van, Peck tried to repair the damage with a coat hanger, as T. G. prayed that the Highway Patrol wouldn't stop to offer help.

On the following day, orientation classes began in earnest. The sense of history persisted, but was much mitigated by the dawning sober (Should I say, grim?) reality of the mountain of material to be learned and by our less-than-olympian surroundings. Our huge and elegant new medical building was barely under construction as our classes began, so our lectures were held in the small Room 237 of the Life Sciences Building, which bulged with a blackboard, lab tables, skeletons, charts, a lectern, and all of us. Our laboratory for gross anatomy was even less pretentious, being a plain windowless basement room, painted black, and barely large enough to contain six stretchers bearing cadavers. It was there we gathered on that first afternoon of classes to make our first acquaintance with the cadavers. Is there any aspect of medical education more fabled than the study of cadavers? Doubtless all of us had heard numerous stories, and doubtless some of us harbored the secret hope that we not disgrace ourselves by any untoward reaction when our cadaver was first revealed. The atmosphere was therefore thick with fascination as we entered that silent windowless room with its array of motionless shapes under white sheets. Our anatomy professor, with what seemed a nice appreciation of the magic and ritual quality of the moment, instructed us gravely upon how to open the airtight bags and to begin to wash the preservative from the cadav-



THE CHARTER CLASS OF THE UNIVERSITY OF SOUTH ALABAMA COLLEGE OF MEDICINE

Left to right: Row 1 – Bill Dumas, John Warren, Dan Meadows, Gene Rich, Tony Taylor, Eldon Scott. Row 2 – George Lacy, Danny Hood, Cecilia Hermann, Robert Cohen, Gaeton Lorino, Charles Herlihy. Row 3 – George Hall, Mike Strider, Pat Murphy, Doug Tappan, George Veale, Robert Levin. Row 4 – Fred Strickland, Pat Kilgo, J. F. "Peck" Garner, Al Newman, John Wagner, Hugh DeJarnette, Tom Wool.

ers, which we knew had been obtained at the last moment courtesy of a neighboring state. After listening carefully to his words, we gingerly opened the bags and soon found ourselves running from the room en masse, choking, with tears streaming down our faces. No one had known that the neighboring state, anticipating years of storage for these cadavers, had used extreme amounts of preservative. The release of such intense fumes into our small and poorly ventilated room had been rather impactful for us all. However, a few minutes of gasping, sniffling, and eventually laughing, sufficed to return us by twos and threes to pursue the work a few minutes at a time.

Perhaps all medical school classes coalesce into tightly knit groups to one degree or another in the face of the difficult tasks they jointly face, but the factors leading our class in that direction were probably stronger than for most. Our small class size was a factor, as was the need to cope with the uncertainty that was continually arising as our teachers struggled to create a medical school around us. At times we felt akin to actors in a pre-Broadway play where the script is undergoing constant revision between performances. Last minute changes in time, place, content, or deliverer of lectures, distribution of handouts still warm from the Xerox machine, administration of exams last given by the same teacher at another school in the context of a similar (but not identical) course — these were common occurrences in those hectic first months.

Once, when confronted over such matters, an obviously exhausted professor told us with semi-apologetic candor that he had been in town less than a month, was still house-hunting so that his wife and family could join him, was trying to get his files and lab set up so he could proceed with his research and thus keep his grant money, was attempting to recruit faculty for the nascent department of which he was chairman, and was still, two weeks into our course, trying to adapt his usual first-year lecture schedule to our different time frame. We could hardly criticize, yet the pressure we felt seemed even more intense because anxiety, to paraphrase an old medical saying, tends to flow downhill. It seemed, though, that what was lost to us in the way of comfort and polish was repaid by the increased proximity to our teachers, shorn as they were of pretense by the intensity of the efforts they were obliged to put forth.

Yet another dimension was added to those days by our clear and explicit awareness that, as a charter class, every custom, every routine that evolved would be a precedent and would define a facet of the role of a medical student in this institution. We therefore felt a heavy responsibility to carve out at least the beginnings of a student role that would be congenial or at least tolerable for the generations of students to follow. Since we were obliged to create our role de novo, without benefit of older students as models, in a situation where we were confronted on the one hand by teachers whose extreme work loads and pressures were inevitably reflected in their demands on us, and on the other hand by a university that had never seen medical students before and therefore had little conception of how they differ from undergraduates, the determination on our parts to create a livable student role as a legacy to future classes was bound to produce occasional lively exchanges of opinion with the administration, which indeed it did. What was actually accomplished is for others to assess, but our class recalls feeling warmed (and perhaps a mite envious) at the vitality and spirited humor shown by one of the succeeding classes in choosing as their symbol the mushroom (because, as a classmember told me, mushrooms are ''kept in the dark and fed 'organic material' all the time, but are still expected to grow.'')

Thus, as a variety of factors provided impetus for our charter class to develop solidarity and as the hour-upon-hour day-upon-day routine of sitting crowded close together in our small classroom provided ample opportunity, we became well known to each other. It did not go unnoticed, for example, when one of us turned orange. (He had been eating large numbers of carrots, presumably for improved night vision to permit more efficient study in the wee hours of the night.) We also came to develop certain conventions of behavior within the class. For example, as the lectures proceeded, each person tended to sit in the same seat so that eventually many seats in the room were recognized as ''belonging'' to a given individual. One day, out of curiosity and sheer cussedness, one of our classmates sat in a chair other than his own. Unspoken turmoil ensued; when that afternoon he resumed his customary seat there was a nearly audible collective sigh of relief.

It is remembered also that grand day when the famed ''white coats'' arrived in the USA bookstore along with the iron-on decals that explained to the uninformed the ''hallowed'' significance of this unusual garb. We dashed over at the midmorning break eager to spend whatever it took to purchase that well-known brand of our chosen profession. Much to our dismay, we found that on campus it was as much a curse as anything — most of us found that we preferred anonymity in the coming months.

We were told that the size of the class and its facilities would lend itself toward more individualized attention, which was true. The hidden disadvantage was that absolutely nothing could go unnoticed. Gaeton ''The Don'' had perfected the art of dozing in class, so we thought. One afternoon, while seated in the front of the room, he must have dreamed he was falling, for he let out a yelp and began grasping frantically in the air for an imagined handhold. The lecture ended promptly.

Between lectures we had a variety of means at our disposal for providing a respite from the rigors of medical school. You could slip over to the snack bar for

a quick game of foosball, but only after having Julia fry a honeybun in butter to be wolfed down with coffee between games. There was usually a billiard game at the student union, a card game in the classroom (I think later classes progressed to more refined games such as bridge, but we played a wild game introduced to us by Fred Strickland), or if you were really energetic you could participate in chair hockey, our own indoor version of ice hockey using a wad of scrap paper and rolling chairs (I think Robert Levin is still revered as the greatest of all goalies).

The Class of 1976 can't be remembered without paying respect to one special member of the class, Emerson. Emerson was very much a part of the class and attended many of its official functions. It was rumored that he finished in the top ten percent of the class on Part I of the National Boards, but this is not confirmed. He even attended classes on occasion. Emerson would come with Pat Kilgo to the last Friday class before out-of-town trips. Dr. Al Lewis of the department of Pathology was insistent on promptness and classroom decorum. Needless to say, he was dumbfounded one Friday afternoon when Pat walked in ten minutes late with Emerson padding close behind. "Either that dog goes or I go!," Dr. Lewis muttered, as his ears began to turn a deep crimson. With that, Pat and Emerson did an about face and marched out. As to Dr. Lewis's comment, Emerson was present at graduation and still resides with Pat in Huntsville.

Although there were some disadvantages to being a member of the Charter Class, the camaraderie that developed among the class members and with the faculty and staff created a valuable experience that will never be repeated at the University of South Alabama College of Medicine.

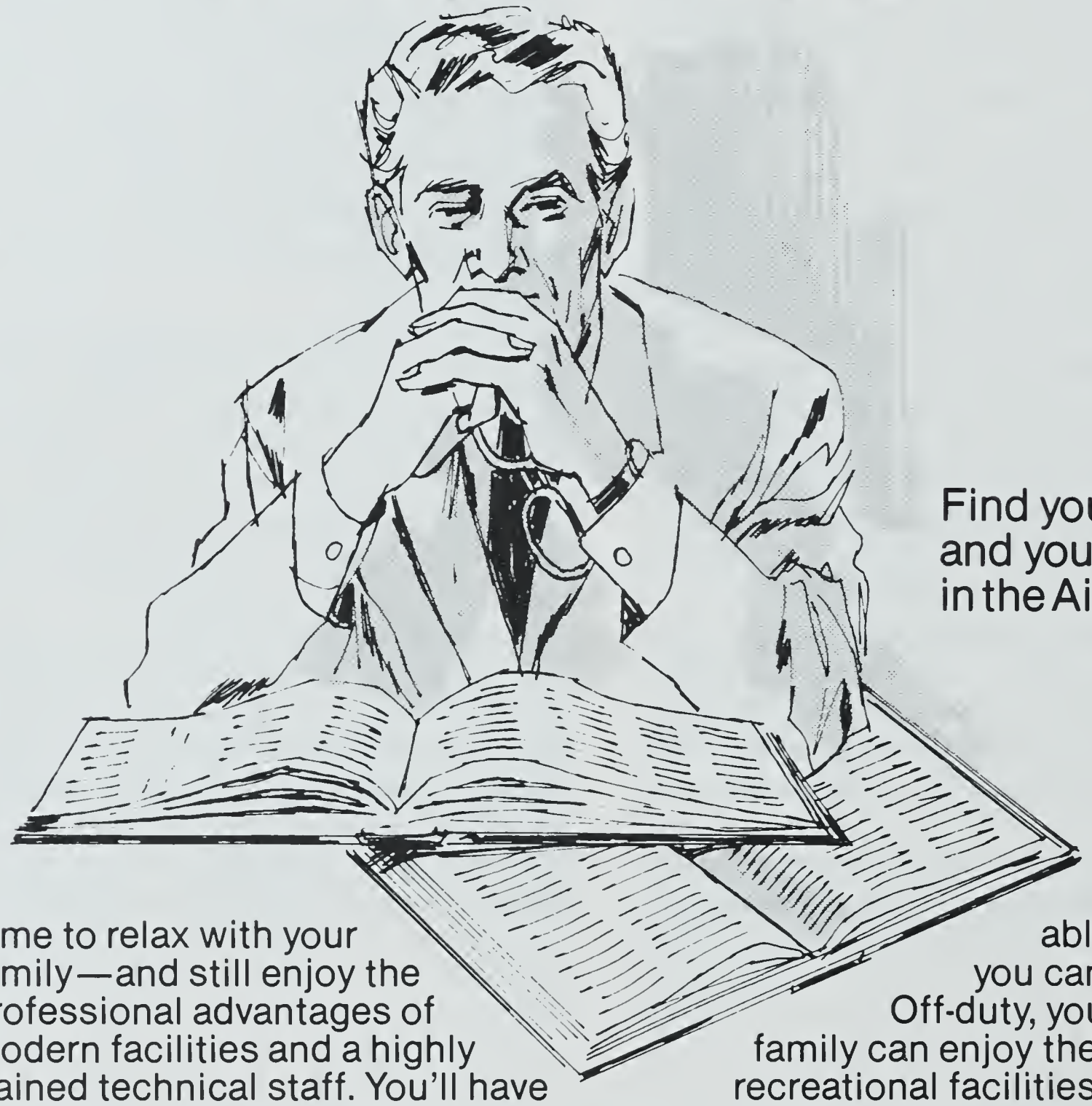
If one word would need to be chosen to best capture the tenor of those earliest days at the University of South Alabama College of Medicine, that word would be "change." Nearly every week, it seemed, brought new faces to join the staff, the new building took shape before our very eyes and was one day declared ready for occupancy, a new class came to begin their studies, and the focus of our class's activities gradually shifted from the classroom to the much larger world of the hospital. As USA steadily acquired the various aspects of a major medical center, a full size student body and faculty, a large and imposing physical plant, a full complement of supporting staff and technological capabilities, a complex organizational structure, etc., the tone of life became calmer and more stable. The emotional atmosphere became less akin to that of a rowboat in heavy seas, and even by the time of our graduation in 1976, more like that of a huge ocean-going vessel on a routine voyage. This is all for the better, no doubt, but one must confess and believe that those early days, for all their trial and trauma, provided a uniquely worthwhile perspective on the teaching of medicine in 20th century America. They are memories of much value.

Time and space do not permit the chronicling of all the many special as well as funny events that marked the passage of the Charter Class through its four years of medical school. When two or more classmates get together, the conversation reminds one of reunions of class friends as participants in World War II or other similar experiences; the tales become more embellished and expanded with age.

Though the faculty takes immense pride in each and every student who graduates from the College of Medicine there can be only one Charter Class. There is a warm and special place in the hearts of the faculty and particularly the early faculty for each member of that brave group of twenty-five students who constituted the Class of 1976, the Charter Class of the College of Medicine, University of South Alabama. ⊡

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The Student Body

Clyde G. Huggins, Ph.D.
Associate Dean for Academic Affairs

Dean Robert M. Bucher, in his statement to the Charter Class during orientation, January 3, 1973, stated very clearly the basic philosophy of the College of Medicine in regard to faculty-student relationships. This charge continues to the present time, and his comments are reproduced here in honor of that important day.

> "We bring together two groups of scholars — a faculty and a student body. We expect both of these groups to grow. Your rate of growth will perhaps be greater, but both will be growing and growing together. A school is a school only when these two groups are assembled. Not all faculty are here yet. Enough have preceded you and they have scurried as they came in to get ready for you. I have a charge to you which consists of maybe just a very few things. One — you have entered the profession of medicine as far as we are concerned, and I think this is the attitude of all of your faculty and the profession in general. We anticipate that you will function with an honor code. This is not the type of honor code which you hear about in colleges. Rather, this is an extension of the basic professional ethic into your educational program. This is not something which you must impose upon yourself. We merely stated that we expect you probably will. It is now yours, and we will help you in achieving your own organization, your elected representatives and other things that you want to do to present yourselves as a group who can manage yourselves."

Student Assembly

The Student Assembly is a university-recognized organization of the College of Medicine in which every student automatically belongs. The Constitution of the Student Assembly was prepared by the Charter Class. The Constitution was recently modified and all changes approved by student referendum in May 1978. This document represents the authority for the Student Assembly in managing the affairs of the student body.

The purpose of the Student Assembly is to unify the students in their interactions with the faculty of the college, with the rest of the university and the community at large. Most of the business of the Student Assembly is carried out through the Executive Committee, which is composed of three elected representatives from each class and the president, vice president and secretary-treasurer who are elected from the fourth-year class.

The honor system, which is under student self-government, is a code providing against dishonest practices in examinations and in other areas. Medical students are also pledged to adhere to the rules and regulations of the College of Medicine. Any infraction of these principles will be the concern of the Executive Committee. Authorized by the Constitution, a duly established standards board is always in place and is the primary component for managing all infractions of the standards code.

Class Officers

The Student Assembly has a president, vice president and secretary-treasurer elected from the rising senior class. This group functions as the organizing unit for the Executive Committee. Each class elects its own class officers. The purpose of the elected officers is to serve as a close liaison with the faculty in all matters of general concern to the college and to the student body. The incoming first-year class elects representatives in September of each year. In the spring the other classes give a vote of confidence to their elected class officers

and if there is a vote of no confidence, then a new election is held. Each class has the privilege for a vote of confidence at any time throughout the course of an academic year.

Student Representation

Each month during the regular academic year, a committee of the faculty with the representatives and the Student Assembly officers meet to discuss matters of concern to the student body as a whole; this group is known as the Faculty/Student Liaison Committee. In this framework there is a free exchange of ideas with recommendations which arise from these meetings for the betterment and welfare of all of the students. This committee has served the student body as well as the college during the first decade, and from this body there have arisen various advances that have permitted the student body to function in an organized way and permits a mature input of student opinion to the management of the college.

The students in the College of Medicine have shown a high degree of maturity in a number of endeavors. Not only was the evolution of the Constitution evidence of



The logo of the University of South Alabama College of Medicine was designed by Boyd Bailey, Class of 1978. Utilizing the basic design of the University's logo, Bailey incorporated the staff and caduceus to complete his winning entry in the logo contest in 1974. Bailey, who now practices in Marion, Alabama, was presented a plaque at graduation commemorating his contribution to the college.

their maturation, but also their ability to function as full members of important medical school committees. Currently, students serve as full committee members on the Curriculum Committee, Student Evaluation and Promotions Committee, Committee on Admissions, and the Human Use Committee. The rising sophomore class elects one representative to serve on the Curriculum Committee and the Student Evaluations and Promotions Committee, and this election carries tenure for three years or graduation. This latter committee is charged with the responsibility for aspects of student evaluation. In addition, this committee has the major responsibility for a) graduation, b) repetition of academic years or courses, c) leaves of absence and d) dismissal. In this regard, student representatives from the second, third and fourth-year classes serve as full members. Finally, two elected students from the senior class function as full members of the Admissions Committee.

In addition to the Student Assembly as a major student organization, other student organizations include the American Medical Student Association, the Student National Medical Association, the Student Business Section of the American Medical Association, a Family Practice Club and the social fraternity, Phi Beta Pi. The national honor medical society, Alpha Omega Alpha, established the Beta Chapter of Alabama at the USA College of Medicine in 1977. Finally, the medical student spouses have formed the Medical Student Auxiliary which is one of the most important supporting organizations in the school.

Financial Supports

The yearly cost for a single student to attend medical school at the University of South Alabama College of Medicine is approximately $8,500. This includes tuition, fees, books, equipment and expenses. The preceding represents the cost of living at the beginning of the current academic year; however, proration of state funds in support of the College of Medicine has caused the Board of Trustees to reexamine the tuition and effective with the winter quarter of the 1982-1983 academic year, the tuition was increased by $1,200 per year, making the yearly tuition $3,600 with a fee structure of approximately $400.

Tuition and fees in public institutions in the southern part of the country average approximately $3,600 per year. Thus, the cost of medical education is no small burden for the student, for the students' parents or spouses. More than 50 percent of our students qualify for financial aid based upon their income, their family's income or their spouse's income.

The Medical Alumni Association for the College of Medicine is rather small since the first class graduated in 1976. Since the school does not have sufficient medical alumni to turn to for support of students in financial distress, the College of Medicine continues to seek other avenues for increasing its capacity to offer loans and scholarships. One of these is an Emergency Student Loan Fund operated by the Office of Academic Affairs. This is an emergency fund which rapidly revolves in the sense that no interest is charged if the loan is repaid within 30 days.

A number of scholarships are available to our students based either on academic performance or financial need. These are the State of Alabama Medical

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School Scholarships Program, the Waterman Scholarship, the Urschel Scholarship, the Southern Medical Association Scholarship, Gibson Foundation, Bedsole Foundation, Goldstein Memorial Scholarship, Stephanie Marsh Scholarship and the Cope Scholarship.

Various loans are available which include the Health Professions Student Loan, the National Direct Student Loan Program, the Guaranteed Student Loan Program through federal subsidy, the Health Education Assistance Loans, (a federally sponsored program with a high interest rate) and the State of Alabama Loan and Scholarship Program. In the latter there is a forgiveness clause based on practice in a distressed area built into the program.

In addition to scholarships and loans there are health professions programs in the armed services, Army, Navy and Air Force. All of the above, coupled with the earning capability of the students and their spouses, have helped to subsidize the students as they move through medical school.

Informalities

Two publications which the students have written serve to advise the students on an informal basis. Medical School Blues and Mobile Jazz, issued every three years, is a student guide. The students have developed a publication known as THE MUSHROOM, which is updated each spring and passed on to incoming medical students. It describes the academic programs in the College of Medicine and also provides student evaluation of the programs. It includes places to live and eat and serves as a source for the various amenities beyond the educational program of the student.

The Charter Class of medical students marshalled the necessary resources to publish a yearbook which resulted in a publication by the time of graduation. The yearbook titled REVIEW OF SYSTEMS, continues to the present time and receives strong support.

An annual event which has become a tradition is known as ''Senior Skit Night.'' This began with the Charter Class and takes place a week prior to graduation exercises. The production is a lampoon of the educational program, as well as ''critiques'' of individual departments, faculty members and supporting staff.

Achievement

Over the last several years our students have shown an increase in the quality of their academic performance as measured by scores in Part I and Part II of National Boards. The recent performance of the Class of 1984 on Part I of National Boards, taken in June 1982, has generated much pride by the students and faculty. The Class of 1984 performed at a much higher level than previous classes. Sixty-eight percent of the class scored better than 500 on this examination. Thirty-two percent scored 600 or better and six percent scored 700 or better. The students have consistently done very well in the National Resident Matching Program, with more than 75 percent receiving their first choice or one of their first three choices. Of the 61 students who graduated in 1982, 15 remained in programs at the University of South Alabama, 11 went to other sites in Alabama, 16 remained in the southeastern states, seven matched at programs west of the Mississippi and 12 matched in other sections of the country.

The students in the college have shown a preference for the broad field of primary care medicine with almost 70 percent electing residency training in these specialties, with 54 percent of all of the graduates choosing internal medicine, family practice or pediatrics. Surgery and surgical subspecialties have attracted 26 percent of our graduates. Most all of our students have been matched in university affiliated programs, excluding those students in the programs of the armed services. Sixty-five percent of the Charter Class are now practicing medicine in Alabama, with 20 percent in practice in contiguous states. Two of the graduates of the Charter Class have finished their training but are still in obligatory military services, with one committed to return to Alabama. It appears that more than half our graduates hope to return to Alabama for their practice.

It is an old axiom that a college of medicine is no better than the students it graduates. Our students have received a quality educational experience in their undergraduate program and have gone on to excellent graduate training programs. It is a joy to observe this progression, and the citizens of Alabama can take immense pride in the accomplishments of the physicians from the College of Medicine, University of South Alabama. ⊡

Admissions

Clyde G. Huggins, Ph.D.

The College of Medicine at the University of South Alabama was authorized by the Alabama Legislature in August 1969. In May 1971 Dr. Robert M. Bucher was appointed the first full time dean of the college. From that time to January 3, 1973, the dean and the charter faculty were able to overcome a number of obstacles and were authorized to admit the first class of 25 entering medical students.

The charter class was comprised of 24 men and one woman who were selected from 119 applications by Alabama residents and 49 non-Alabama residents. The charter class graduated in June 1976. Since 1973 the college has been accepting 64 entering students per class.

Inasmuch as the college is a state-supported institution, the College of Medicine has placed much emphasis on the selection of well-qualified Alabama residents. Of this number, 4,608 were Alabama residents and 5,304 were non-residents. Acceptances were offered to 646 Alabama residents and 44 non-residents for a total of 690 students who matriculated in the college from January 1973 to September 1982.

Selection

Students are not selected solely on the basis of their grade point averages and performance on the New Medical College Admission Test. Other factors are also carefully evaluated such as emotional maturity, character, motivation, stability and extracurricular involvement. The college seeks students with diverse interests who are well-rounded in all aspects.

The 646 Alabama residents who have matriculated in the college from January 1973 through September 1982 have been selected from 61 of the 67 counties in the state. Also, students from two other counties elected to matriculate at other institutions. All efforts are being made to have student representation in our college from all 67 counties as soon as possible.

Well qualified students of varying ethnic backgrounds have also been given special consideration. Forty of the 690 students matriculating from January 1973 through September 1982 were from minority backgrounds.

The 1976 charter class of 25 came to us from 15 schools, whereas the 1982 entering class of 65 received their training at 28 different colleges and universities. The number of institutions represented in the classes between these years increased steadily.

Our first decade saw students coming from a total of 103 institutions. Three hundred fourteen individuals had attended one of the 16 universities in the state university system. In addition, 58 took their premedical training at six other Alabama colleges and universities. The balance came from such widely varied institutions as Emory, West Point, Johns Hopkins, Notre Dame, Vanderbilt, Cornell, Tulane, Dartmouth and Duke. Applications have been received from every geographic area in the United States.

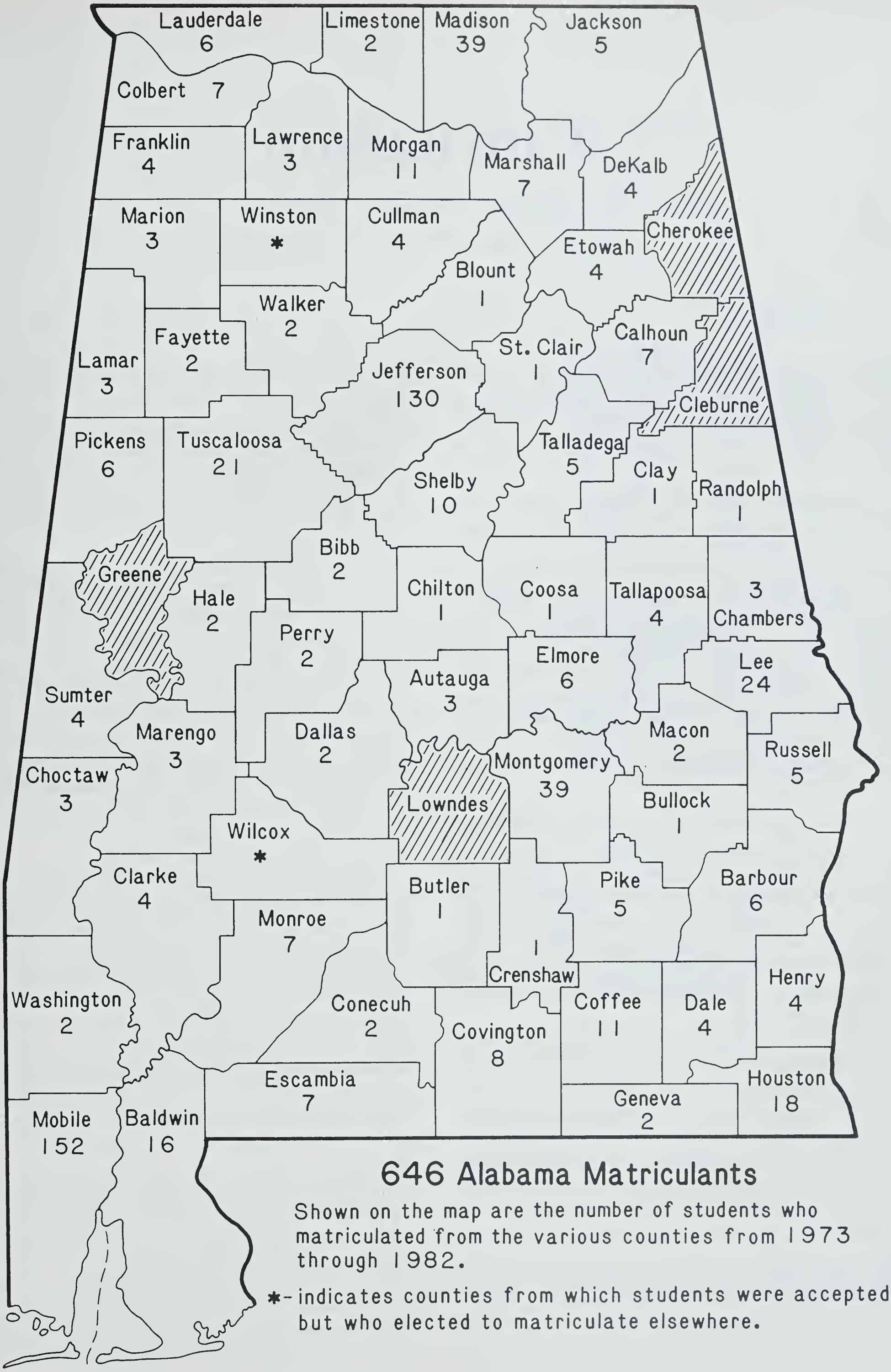
The college graduated its charter class in June 1976. Through June 1982 we have graduated a total of 382 physicians, 323 men and 59 women. In keeping with our commitment to serve the citizenry of the state in an objective, equitable manner, we have tried to eliminate biases and external forces that could adversely influence the decisions of the Committee on Admissions.

The following table summarizes a few major quantifiable factors that have been considered in the overall selection process for students matriculating from January 1973 through September 1982. ⊡

STUDENT MATRICULATION IN THE COLLEGE FROM JANUARY 1973 THROUGH SEPTEMBER 1982

Total Matriculating	*Alabama Residents*	*Non Residents*	*Men*	*Women*	*Minorities*	*Number SUS**	*Alabama Born*
690	**646**	**44**	**560**	**130**	**40**	**353**	**395**
Percent	**93.6**	**6.3**	**81.0**	**19.0**	**5.7**	**51.1**	**57.2**

*** State University System.**



646 Alabama Matriculants

Shown on the map are the number of students who matriculated from the various counties from 1973 through 1982.

*- indicates counties from which students were accepted but who elected to matriculate elsewhere.

Curriculum

Clyde G. Huggins, Ph.D.
Associate Dean for Academic Affairs

This comment was made by Dr. Robert M. Bucher, the first dean of the University of South Alabama College of Medicine, during orientation for the class entering September 1973. It is just as applicable in 1983.

> "Medical school is not easy, and there is no use in trying to kid you. There will be times when you will feel a little concerned as to whether or not you are going to make it, but I want you to know that we do have confidence in your ability to do so. What you are entering into is an endeavor which I hope will be looked upon as a team endeavor — you and the faculty together. These are things that make up an institution. We will do everything that we can to help you achieve the standards that you *must*. We will not relax the standards — we can't do that — but our whole purpose is to help you. Do not be competitive with other than with yourself."

The primary objectives of the programs established in 1972 remain with slight modifications to the present time. They are education, research and service. These objectives are leading us to create an environment conducive to learning and research in all fields of human biology and health care which will permit both students and faculty to realize their potential, and to encourage scholarly endeavor, intellectual curiosity, and extention of new knowledge.

The College of Medicine conducts educational programs which include undergraduate medical education and undergraduate and graduate education in the sciences. The clinical programs in graduate education are responsive in scope and magnitude to the health care needs of the state of Alabama. Clinical educational programs prepare students for clinical practice. They are of such quality that they provide a foundation for individuals who wish to enter careers in teaching and research.

The charter class matriculated on January 3, 1973, with a traditional four-year curriculum (See TABLE I). Many factors contributed to this. The first factor was the rapidity with which the college admitted the charter class. In early July 1972 not more than ten full-time faculty members had been appointed, yet six months later the charter class matriculated. Limited facilities were perhaps the most compelling of these factors. The college elected to stay with the traditional two years of basic sciences and two years of clinical sciences, the latter divided into one year of clerkship and one year of clinical electives.

Because of the small class size, the small number of faculty, and few traditions or prejudices, it was possible to introduce new educational experiences into this traditional program of educators.

TABLE I shows the curriculum for the charter class of medical students and TABLE II shows the curriculum as it currently exists, which shows the educational programs to be very similar. The curriculum is designed so that the average student may complete the academic program over a period of four calendar years. Its primary objective is to provide a foundation in the basic principles of medicine for a career in medical practice, investigation and teaching.

Although there have been minor changes requiring alternation in the sequence of major courses, the curriculum differs little from the program initiated at the time of the charter class. The program of study lasts approximately 170 weeks, culminating in the award of the Doctor of Medicine degree.

The emphasis in the first two years is on the principles of the basic medical sciences and correlation of these principles with individual and community health problems. The last two years provide experience in the clinical setting where emphasis is on patient care in the University Hospital and in community-based programs.

The weekly format in the first year generally calls for daily scheduled, basic science activities on the main campus, with some didactic instruction and conference activity at the Medical Center.

The weekly schedule in the second year provides basic science activities on the University campus and clinical experience at the Medical Center or in affiliated health care centers. The second-year student spends

TABLE I
UNIVERSITY OF SOUTH ALABAMA
COLLEGE OF MEDICINE
CURRICULUM OF CHARTER CLASS

COM I

Jan. 1973 12 wks.		12 wks		12 wks Aug. 1973	
Gross Anatomy	(240h)	Histology	(192h)	Physiology	(180h)
Cell Struc. Func.	(84h)	Biochemistry	(132h)	Neuroscience	(144h)
		Intro. to Neurosc.	(12h)	Intro. to Neurosc.	(12h)
Intro. to Neurosc.	(12h)	Intro. to Clin. Sci.	(36h)	Intro. to Clin. Sci.	(36h)
Intro. to Clin. Sci.	(36h)	Med. Prac. Soc.	(12h)	Med. Prac. Soc.	(12h)
Correlat. Conf.	(24h)	Correlat. Conf.	(24h)	Correlat. Conf.	(24h)

COM II

Sept. 1973 12 wks		12 wks		12 wks June 1974	
Pathology	(108h)	Pathology	(108h)	Pathology	(108h)
Physiology	(78h)	Microbiology	(132h)	Microbiology	(36h)
Pharmacology	(78h)			Pharmacology	(96h)
Intro. to Clin. Med.	(48h)	Intro. to Clin. Med	(96h)	Intro. to Clin. Med.	(96h)
Medical Exam.	(48h)	Med. Exam.	(48h)	Med. Exam.	(48h)
Behavioral Sc.	(48h)	Behavioral Sc.	(48h)	Behavioral Sc.	(48h)

COM III

July 1974	Clerkships			June 1975
Medicine 10 wks	Surgery 10 wks	Pediatrics 10 wks	Obstetrics Gynecology 10 wks	Psychiatry 10 wks

COM IV

Sept. 1975	Selective Year	June 1976
Nine (9), Four-week Rotations		
Each student must take one rotation in a Basic Science, one in Medicine. Four rotations may be selected in other medical centers (approval needed). One rotation may be used for vacation.		

TABLE II
UNIVERSITY OF SOUTH ALABAMA
COLLEGE OF MEDICINE
CURRENT CURRICULUM
1982-1983

COM I

August — 37 weeks — May

Gross Anatomy (216h)	Biochemistry (160h)
Histology (139h)	Physiology (192h)
Neuroanatomy (133h)	Medical Ethics (16h)
Embryology (36h)	Medical Practice & Soc. (32h)
Correlation Conference (40h)	Correlation Conference (34h)
	Immunology (20h)

COM II

August — 39 weeks — June

Pathology (364h)	Medical Genetics (30h)
Microbiology (176h)	Pharmacology (184h)
Physical Diagnosis (140h)	
Behavioral Science (140h)	
	Public Health — Epidemiology (24h)

COM III

July — Clerkship Year 49 weeks — June

Medicine 12 weeks	Family Practice 6 weeks	Psychiatry 6 weeks	Surgery 8 weeks	Pediatrics 8 weeks	Obstetrics — Gynecology 8 weeks

COM IV

June — Selective Year 49 weeks — May

Twelve (12), four (4) week Rotations.

Each student must take eight rotations for credit. Additional may be elected. All students must take one rotation in a surgical subspecialty, one in a neuroscience and three may be taken in other medical centers. All seniors must be certified in ACLS.

approximately 60 percent of the time on the main campus and some 40 percent in the Medical Center and its affiliated programs.

The third year is the clerkship year. Initially the third year was divided into the following rotations: Medicine, Surgery, Pediatrics, Obstetrics/Gynecology and Psychiatry, each of ten weeks in duration. This format has had several minor modifications during the first decade and currently the third year programs are composed of the following clerkships: Medicine, twelve weeks; Pediatrics, Surgery and Obstetrics/Gynecology, eight weeks each; and Family Practice and Psychiatry, six weeks each.

The fourth year is little changed from the programs essentially initiated. It is a selective year composed of four-week rotations. Initially there were ten four-week rotations. Commencing in June 1983 there will be twelve four-week rotations. Each student is required to participate in at least eight elective rotations, with the balance being available for vacations or additional elective experiences should the student so desire.

In the third year and during the elective period of the fourth year the clinical clerk is assigned full-time to the specific program, with time commitments and responsibilities assigned by the coursemaster of that particular clerkship or elective.

In the first year, Block I consists of Gross Anatomy, Histology, Embryology, Neuroanatomy and Correlation Conferences. Block II of Year One is composed of Biochemistry, Physiology, Immunology, Correlation Conferences, Medical Practice and Society, and Medical Ethics.

In the second year, the block system is used again. Microbiology/Immunology terminates at the end of the first block, at which time Pharmacology is introduced. The other courses in the second year, which essentially go throughout the total year are Pathology, Physical Diagnosis and Behavioral Science. One also notices that there are additional courses which also appear in Block II of the second year (TABLE II). These include special topics such as Medical Genetics, Epidemiology and Nutrition. TABLE I shows a course titled "Introduction to Clinical Medicine," which was spread over the whole second year. This particular educational experience was recently absorbed into the educational program under Pathology where Pathophysiology and Laboratory for Clinical Medicine is taught.

In the third year a clerkship in Family Practice is a requirement. The clinical clerk is assigned to the department of Family Practice on a six-week rotation and is under the supervision of a preceptor who has a hospital base as well as an office practice. The supervisor is generally a primary-care physician. Students are full-time with the preceptor working in the daily practice of medicine as seen in the physician's clinic. They also participate in the rural community-based hospital program with which the department has developed an affiliation. The sites may be anywhere from 100 to 150 miles distant from the college. Various conferences and other teaching programs are held in these areas.

The fourth year is devoted to electives and is divided into four-week rotations. The first elective year was ten rotations; now the program calls for twelve four-week rotations. Each student is required to work full time in eight of the total rotations. Currently, one rotation must be used for a surgical subspecialty and one must be used for a neuroscience. The philosophy of the program is to permit the students, with counsel, to select a course of study which will be supportive of their career goals. In addition, it permits the student to pursue areas of special interest.

If the student so desires, all rotations may be used for elective experiences; however, the student is encouraged to take at least one rotation as vacation time. Three of the eight required rotations may be taken at extramural sites. The student may also utilize extramural sites for elective experiences in which this activity is substituted for vacation time. Thus, a student in the twelve-rotation system may spend seven months in experiences in other medical centers. In the twelve-rotation system, four of the rotations may be used as vacation time or the students may elect to finish all of the academic requirements four months early and, should they so desire, immediately proceed with the process of initiating their PG-I year.

Should the student desire experiences in other medical centers, the student is responsible for working out the details of the elective with the office of Academic Affairs and must receive the approval of the appropriate departmental chairman.

The requirement for successful completion of Part I and Part II of the National Boards of Medical Examiners was established in the very beginning of the medical school. As candidates all students must pass both Part I and Part II before they may be graduated from the College of Medicine, and their scores become a part of their permanent record. Students are permitted three attempts to pass each part of the examination. Any student who does not pass Part I in June following the end of the second year is required to repeat the examination in early September. A student who does not pass Part I on the second attempt in September following the end of the second year may elect to take a leave of absence to study and prepare to repeat the examination for the third and final time in June of the following year. All students must take Part II of National Boards as a candidate in September following the end of their third year of medical school. Any student who does not pass Part II in September of the fourth year will be required to repeat the examination the following April. Passage of Part II is required for graduation in June. ⊡

Faculty and Student Research in the Basic Sciences

Charles M. Baugh, Ph.D.
Associate Dean, Basic Medical Sciences

Introduction

The pace of acquisiton of new knowledge in the biomedical sciences outstrips, by far, the rate of textbook publication. Therefore, teachers in academic medicine should also be investigators if they are to remain up-to-date in their fields of expertise. It is a widely accepted fact that scholarly productivity on the part of medical faculties and the quality of the physician product are closely coupled and inseparable. The College of Medicine of the University of South Alabama has, since its inception, enthusiastically endorsed this philosophy. Policies on faculty recruitment and retention, direct and indirect research support, and space allocation have been carefully focused on the objective of supporting each faculty member in his effort to achieve their maximum scholarly potential.

These concerns have also extended to undergraduate medical students. If a physician is to remain current, he must be committed to lifetime learning. This need is recognized and partially met through organized continuing medical education programs. However, there remains a necessity for physicians to read and comprehend the primary biomedical literature. The ability to critically evaluate original data, interpret results, and draw conclusions can best be developed in medical students by their direct exposure to research. The College of Medicine has recognized and met this need through a very active summer research program for undergraduate medical students.

Historical Perspective

Beginning a college of medicine presents many challenges not the least of which center around planning, building and equipping of suitable research facilities. Clearly the complexities encountered are forever increasing in direct relation to advances in scientific technology and the essential research equipment that must be acquired, housed, and maintained in order to support a competitive research environment.

In 1973 the slate was clean, no facilities existed. Resources were limited. A faculty and student body was being recruited. Time was pressing. These divergent factors presented many opportunities to squander resources and make the kinds of judgemental errors that would haunt the institution for years to come. In retrospect, most of the early pressing decisions have proven to be sound and have sustained the research thrust of the College of Medicine over its first decade. Important among these were decisions to house all the basic science departments in contiguous space with all supporting facilities such as: vivarial, electron microscopy, and computing close at hand. It was also decided to stretch resources by the strategic location of widely used equipment and to encourage its shared use by the faculty regardless of departmental affiliations. This latter decision has had a significant impact on minimizing the traditional departmental barriers, encouraging faculty interaction, collaboration and cooperation, while allowing the acquisiton of the best and most up to date research equipment. The identification of major equipment needs was closely tied to faculty recruitment. Once a suitable faculty member had been identified, his specific research equipment needs were carefully assessed. Those needs beyond the capabilities of shared equipment already in place, were acquired. Intramural funding was made available to those incoming faculty members without extramural support through a meaningful peer review system. The general goal was established that a newly recruited faculty member

would suffer little or no downtime in relocating his or her research activities to the College of Medicine.

An overview of the total extramural funding over the past decade for the College of Medicine may be seen in Figure I below. Several comments are of interest regarding the data presented in Figure I. Records do not permit an accurate figure for 1973. The College of Medicine research office was established in 1976 along with meaningful recordkeeping procedures and a staff to facilitate the submission of grants and to perform essential interactions with granting agencies.

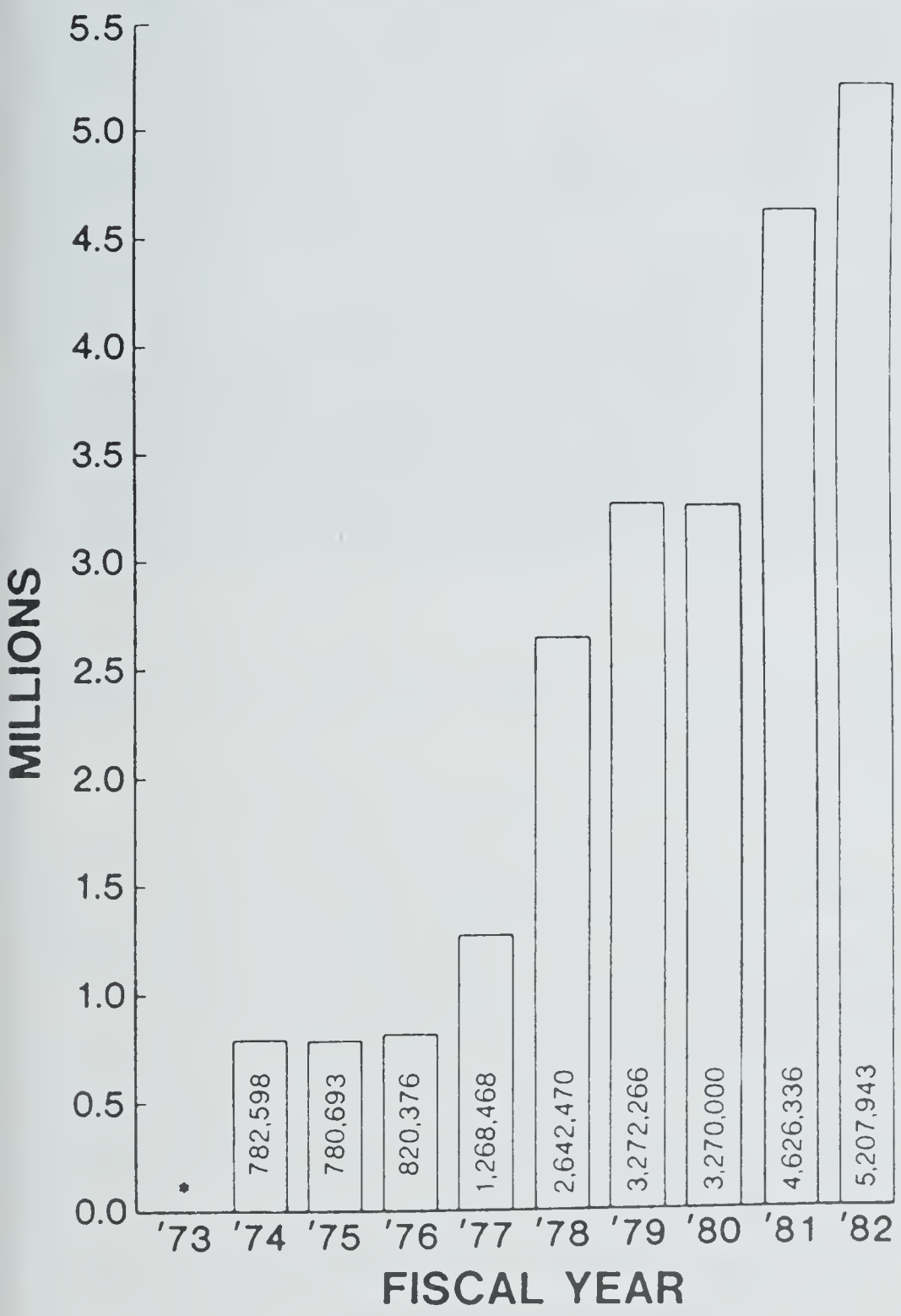


Figure 1

Although total extramural research dollars represents a critical dimension of an institution's research potential, there are other significant parameters which must also be considered. The number of individual research grant awards is a measure of the breadth and depth of faculty research expertise. It is also felt that the larger the number of grants the more stable the research support base for an institution. The number of extramural research grants awarded to the College of Medicine's faculty during each of the last ten fiscal years may be seen in Figure 2, below.

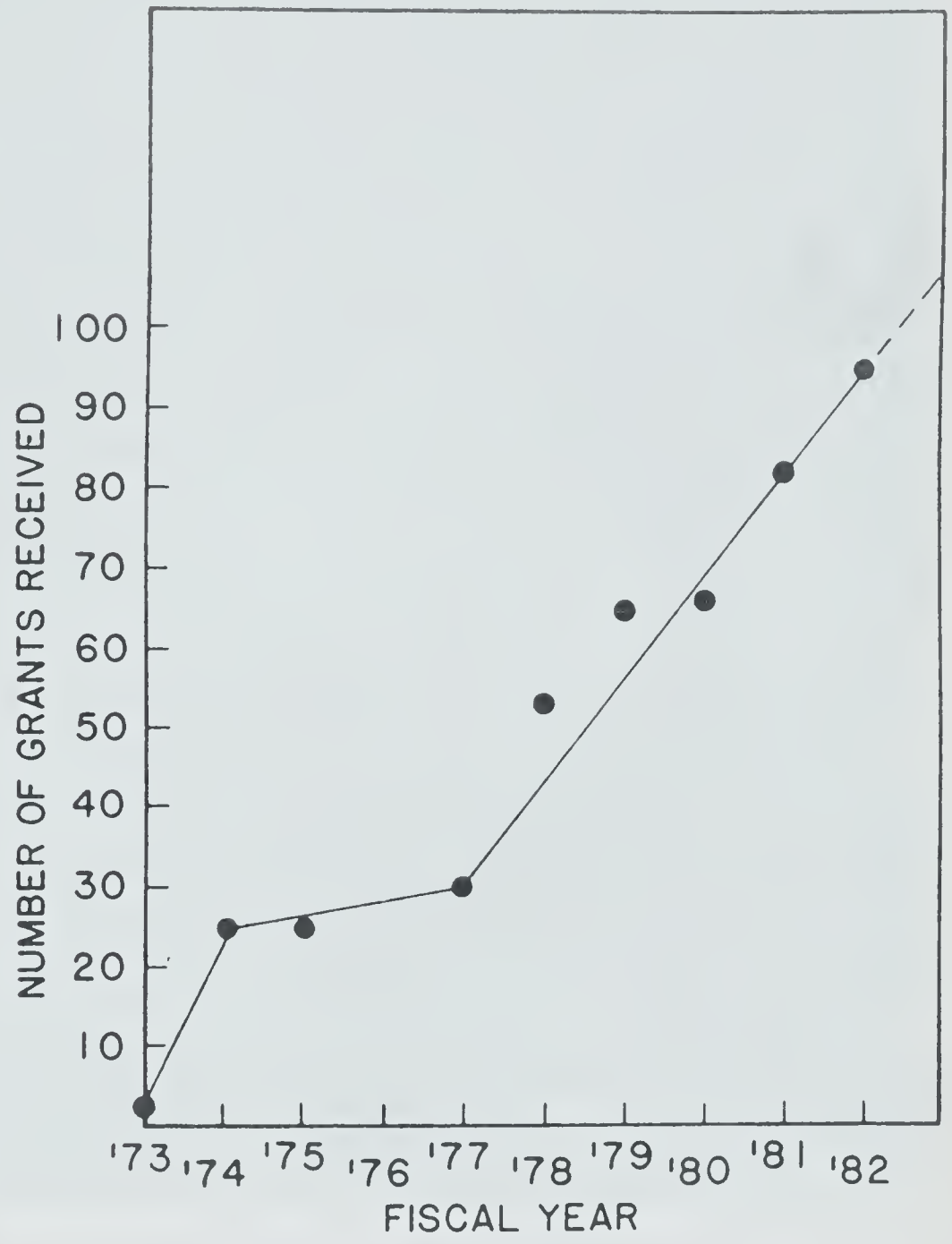
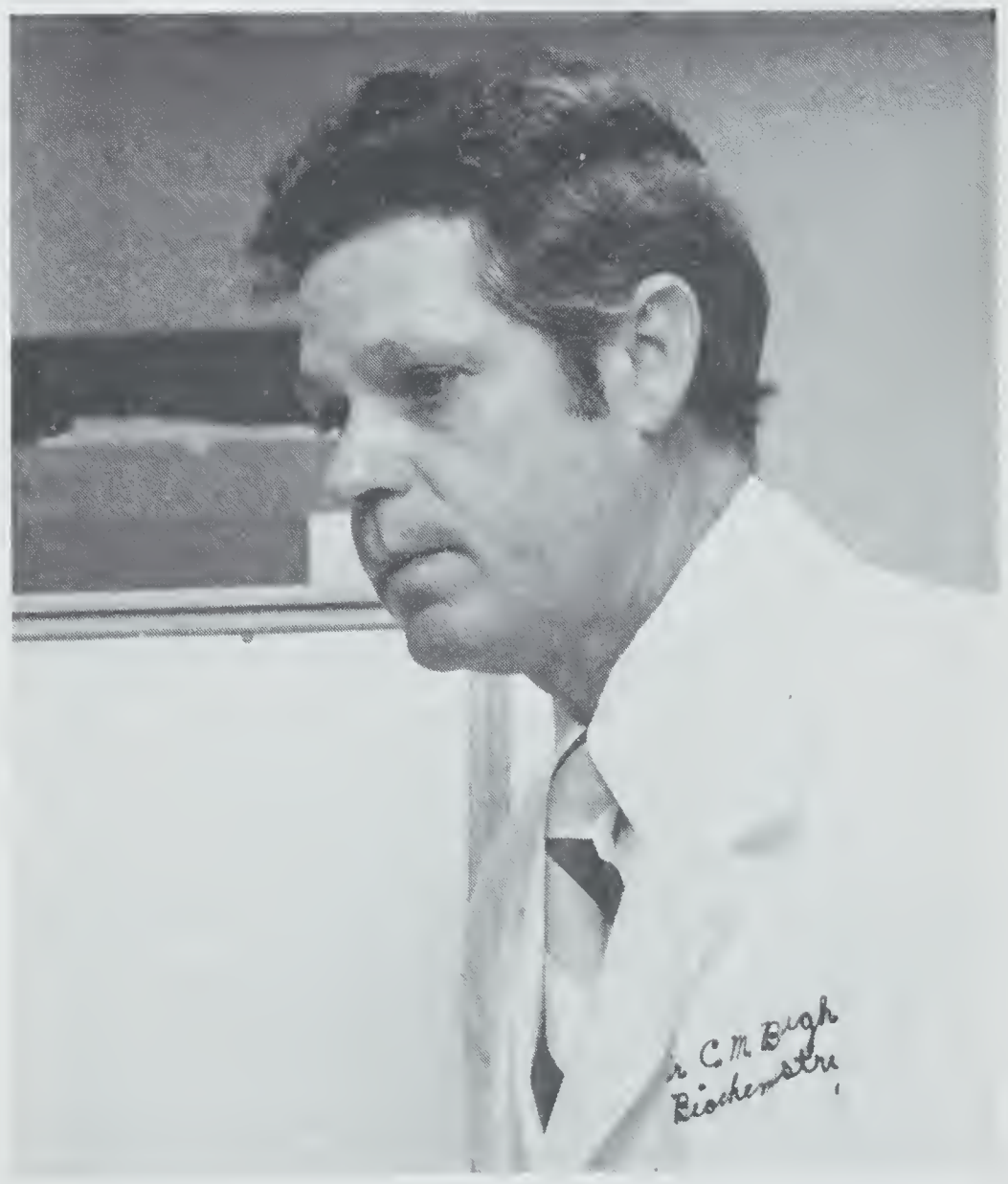


Figure 2



Dr. Charles M. Baugh, associate dean for Basic Medical Sciences at the University of South Alabama.

Faculty Research

The extramurally supported faculty research in the basic sciences may be reviewed in Table I, below. Each basic science department has seven tenure track faculty members with the exception of Anatomy, which has nine. Inspection of this table will show, by basic science department, the extramural research support awarded in fiscal year 1982 as well as the funds in the pipeline as a consequence of multi-year commitments. These funds in general have been obtained by individual faculty initiative through the standard peer review system of the National Institutes of Health. Thus, we see 68 separate research projects have been funded on behalf of the 37 full time tenure track faculty in the five basic science departments.

TABLE I

Department	*Number of Active Grants*	*Total Awards Funding For Fiscal Year 1982*	*From Multi-Year Commitments*
Anatomy	**12**	**$584,543**	**$1,520,370**
Biochemistry	**12**	**737,792**	**2,591,927**
Microbiology/ Immunology	**10**	**669,907**	**2,437,404**
Pharmacology	**21**	**705,552**	**1,726,492**
Physiology	**13**	**592,932**	**2,432,188**

Student Research

The College of Medicine presently has four student research related programs; (1) Summer Medical Student Research program, (2) Graduate Student Research, (3) Summer Undergraduate Research Program and (4) The Minority High School Research Apprentice Program.

1. *Summer Medical Student Research Program*

This program was initiated in the summer of 1973. The program operates as follows. The faculty each spring develop research proposals suitable for a productive summer research experience for a student and describe the project in a one page prospectus. These project descriptions are peer-reviewed by a faculty committee and those meeting the committee's standards are collated, duplicated, and circulated to all medical students including those accepted for admission to the College of Medicine, prior to their matriculation. The students review the proposals and contact the faculty authors to discuss the research in more detail and to ascertain mutual compatibility. Ultimately, each student will self-select a project and a mentor. Together, the faculty member and the student complete the paperwork to formalize the summer's research and to obtain the student stipend. The student agrees to submit a report of his or her summer's work, to participate in Student Research Day activities and to submit a publishable abstract.

This program is viewed by faculty and students as a very positive educational experience. In 1980, the National Institutes of Health recognized the quality of this program with the awarding of a five year grant. This grant will provide eighteen student stipends each summer and provide modest operational support for the program.

2. *Graduate Student Research*

In 1978, fifteen graduate students were admitted as the initial class in our Ph.D. program in Basic Medical Sciences. To date, 70 students have been admitted to the program and 45 remain active. This represents an attrition rate of 36 percent. This is a five year program which will award its first doctor of philosophy degrees in the spring of 1983. The Ph.D. program has a number of unusual features. For example, it is possible for a student to enter the program after three years of appropriate undergraduate study. This program strives to produce a broadly trained student with in-depth training in one of the basic medical sciences. This is accomplished with a core curriculum which lasts for about 20 months followed by three years of in-depth research and education in one of the basic science departments. This program will produce its first graduates in 1983.

In general, Ph.D. students may only be assigned to faculty mentors who are actively engaged in extramurally funded research. This insures that the students are being trained by competent faculty in research areas that are of sufficient current interest to attract extramural financial support.

3. *Summer Undergraduate Research Program*

The graduate program in Basic Medical Sciences initiated a summer research program for undergraduate college students in 1980. This program accommodates ten students for approximately ten weeks each summer. The competition for admission to this program becomes more intense each year. Currently, approximately one in ten applicants is successful in gaining admission to the program. The students are assigned to specific laboratories in basic science departments selected by the students. An in-depth research experience is enjoyed by most participants. The students are active, creative investigators who plan and conduct a meaningful research project.

Student participants are encouraged to re-apply in future competitions and eventually, to compete for a position in the Ph.D. program.

4. *The Minority High School Research Apprentice Program*

In 1981 the College of Medicine was invited by the Department of Health and Human Services to apply for a small grant. The grant, if awarded, would pay a



The Medical Sciences Building at the University of South Alabama is the main facility for basic medical education within the college.

portion of the stipends in support of a minority high school student spending the summer in a biomedical research environment. In each of the past two summers, five students have been selected with the aid of Mobile County Science teachers and high school principals. During the second summer, three of the students were repeaters from the first summer program.

These students are placed in active laboratories where they are encouraged to participate and more importantly, to comprehend the research in progress. These students are encouraged to interact with the other types of students and to attend all departmental functions. The program is directed toward introducing the minority student to the broad range of professional career opportunities the biomedical sciences offer.

Summary

The student research programs fill a continuum from high school level students to students receiving the M.D. or the Ph.D. degree. It is felt that these diverse programs meet a number of societal needs while fulfilling the educational and research responsibilities of the College of Medicine.

At the end of our first decade, it has become apparent that the research thrust of the faculty in the College of Medicine has evolved to a remarkable level. This accomplishment assures the long term quality of the various education programs and provides unusual opportunities for faculty development and recognition. ⊡

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The Army Medical Department offers an opportunity for financial support for individuals accepted to AMA or AOA accredited medical schools. Approximately 250 students starting their professional education in 1983 will be selected to participate in the Army's Health Professions Scholarship Program (HPSP). The HPSP pays for the participant's tuition, books, instruments (under $200/item) and, most academic fees required by the school while providing a monthly stipend of $556 for 10½ months plus active-duty pay for six weeks each year.

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Facilities

John M. Shackleford, Ph.D.
Professor, Department of Anatomy

Facilities of the University of South Alabama College of Medicine have expanded at a steady pace since the admission of the first class of students. Two buildings, the Hospital and the Mastin Building existed from the beginning, but an average of one new building per year has marked the continued growth and vitality of the educational and research efforts of the college.

Medical Sciences Building

The Medical Sciences Building was the first building constructed for the new college. It is a modern three-story structure with a medium-sized auditorium, lecture rooms, and conference rooms to accommodate small groups. The space in the central part of the building is exclusively for student use. In this area are found both ''stand-up'' and ''sit-down'' laboratory facilities. The latter were designed so that each laboratory accommodates up to 24 students who use them on a ''home-base'' concept. In addition, research laboratories are available for the students to use. The building also contains the animal resources area (vivarium) and other supporting services, such as electron microscope suite, audiovisual and computer aids, and the gross anatomy teaching laboratory. The undergraduate student has continuous access to the building.

Medical Center

The primary site of undergraduate clinical programs is the University of South Alabama Medical Center and its hospital. The Hospital is essentially a new building, and was known as Mobile General until 1975 when its name was changed to the University of South Alabama Medical Center Hospital. It currently has 376 beds with loft space for an additional 120 in the upper two stories.

The Mastin Building, located adjacent to the USAMC Hospital, is a seven-story structure housing faculty offices, classrooms, specialty clinics and an extensive biomedical library.

The Moorer Clinical Sciences Research Building, located next to the Hospital, contains office and research space and an experimental outpatient clinic operated for the Veterans Administration. An additional animal resources research facility for the clinical faculty is adjacent.

Cancer Center/Clinical Building

The Clinical Sciences Building, recently constructed on the University campus, houses medical school administrative offices, research laboratories, offices for the clinical faculty and the Cancer Center.

The Cancer Center/Clinical Building is a regional resource and referral locus for unique problems in radiation therapy, radiation physics, treatment planning and cancer patient care management.

The patient support area within the Cancer Center includes a spacious reception room and areas for medical record-keeping and psycho-social consultations. Separate patient waiting areas are located outside examination and treatment rooms. A nurses' station and doctors' work area are in close proximity. Additional work space is available for resident physicians in training for specialization in cancer therapy.

Laboratory of Molecular Biology

The Laboratory of Molecular Biology was planned in 1977 to accommodate infectious diseases and recombinant DNA research in the medical college and the department of Microbiology and Immunology in particular. The original unit was funded by the National Cancer Institute of the National Institutes of Health. Since opening in 1979 the laboratory has been upgraded to a level P3 containment involving some 3,800 square feet; 1,000 square feet of the area can be operated at the P4, the highest level of biological containment. The facility is a model containment unit with the



University of South Alabama Medical Center Hospital



Mastin Building, USA Medical Center

latest technological design features for research involving infectious agents and recombinant DNA.

Primate Research Laboratory

The University of South Alabama Primate Research Laboratory incorporates modern laboratory design features with standard facility design to provide the University with an innovative and functional research resource for studies using non-human primates. The research laboratory was designed specifically for housing a large primate breeding colony for multi-disciplinary studies aimed at improving reproduction in captivity. The facility is constructed with an indoor-outdoor animal housing area with walls that open to take advantage of mild weather and reduce energy costs.

Family Practice Center

The Model Family Practice Center, constructed on the University campus adjacent to the Medical Sciences Building, houses fourteen examining rooms, one minor surgery room, nine faculty offices and four resident offices. In addition the facility includes a fully equipped clinical laboratory, an x-ray suite, patient education center, family counseling room and a library-conference room. The department of Family Practice also maintains a suite of offices in the Mastin Building and a small, off-campus facility in Fairhope, Ala. Plans for a permanent facility are now underway for the Family Practice Center to be located adjacent to the new Cancer Center/Clinical Building and Health Services.

Children's Medical Center

The Pediatric Outpatient Program of the USA College of Medicine was founded in 1977 outside of the hospital setting and was situated until 1980 in a private pediatrician's office. In 1980 a prefabricated modular office building was purchased by the University of South Alabama and was placed in some adjacent to the Hospital. This building, titled the University of South Alabama Children's Medical Center, contains sixteen examining rooms, observation rooms equipped with one-way glass and video. In addition there are three nursing stations, a conference room, clinical laboratory and offices for three faculty members and staff.

Computer Center

The University Computer Center provides services to both the academic and administrative programs of



University of South Alabama Health Services Building

the College of Medicine. Students and faculty have direct access to the computer seven days a week through card reader and computer terminal facilities. In addition, the college has developed interactive computer capabilities that are used for its research programs.

Health Services

The most recently completed facility is the University's Health Services Building. USA Health Services, which officially began operation June 1982 is an outpatient medical facility operated by the University of South Alabama Health Services Foundation. The modern comfortable setting, located adjacent to the Clinical Sciences Building on the University campus, enables faculty physicians from the College of Medicine to provide quality medical care in conjunction with the teaching program. The facility contains 60 examining rooms, several specialty rooms, x-ray facilities, a fully equipped laboratory and pharmacy, and a 12-bed student infirmary.

Forensic Sciences

The Forensic Sciences Building will constitute a unique undertaking by the College of Medicine in conjunction with the State Department of Forensic Sciences. Under construction since July 1982, it will comprise 28,000 square feet and will adjoin the hospital. The space will be shared equally between Pathology and the State Department of Forensic Sciences. ⊡

Biomedical Library

The Biomedical Library of the University of South Alabama, serving the College of Medicine, the College of Allied Health Professions, and the School of Nursing, was established in June 1972. It is now the largest health sciences library on the Gulf Coast between New Orleans and Tampa, and serves an area far beyond the boundaries of Mobile.

Presently the Biomedical Library is housed at two locations. On the university's campus the library occupies room 312 of the Library Building. Housed here are the administrative and personnel functions of the library as well as the main collections. The branch, housed in the Mastin Building at the USA Medical Center, holds the current clinical medicine materials and supports the informational needs of the hospital.

Currently the total collection approximates 58,000 volumes, with 2,450 paid subscriptions to periodical and serial titles.

Staffed by seven Medical Library Association certified librarians plus thirteen support personnel, the Biomedical Library is a member of the Regional Medical Library Program sponsored by the National Library of Medicine.

Through the use of computerized literature data bases supplied through the National Library of Medicine and Bibliographic Retrieval Services, Inc., the Biomedical Library is able to make the health literature of the world available to its users. ⊡

Graduate Medical Education in Mobile

Hollis Wiseman, M.D.
Professor, Department of Pediatrics

The Early Years

Centrally located along the Gulf Coast, Mobile, Alabama has been a provider of medical care since it was founded in 1711. Distinguished among the first cities of the South as the home of the second-oldest hospital in the nation and the first medical college of Alabama, Mobile maintains the distinction of being the major provider of health care for the region and home of one of the fastest-growing colleges of medicine in the country.

In reading histories of medical education in Alabama, one finds central the interest and support for developing a formal medical education program in Mobile. Early records document the accomplishments of visionary, Dr. Josiah C. Nott, founder of the Medical College of Alabama in 1859 which was recognized as the best-equipped medical school in the nation.

The records also show an enormous support for the college, from both the political and private communities. Dr. Nott's endeavors established a tradition that would endure a civil war, poverty and political upheaval.

Although there is considerable documentation concerning undergraduate medical education in Mobile from 1859, less has been written about graduate education. In the spring of 1895 when the Sisters of Charity, after a hiatus from 1880, were asked to again take charge of the City Hospital, a contract was required by the city. A number of interesting provisions were included. One statement records the dictate, "The medical staff shall be divided into an attending staff, a consulting staff and a resident staff. . . . " "The medical staff shall consist of an intern, a resident physician and two externs, visiting medical students, to act as his assistants. The interns shall be chosen annually by the faculty of the Medical College of Alabama and shall reside in the hospital."

Assuming this was a continuation of a previous practice, "resident physicians" were probably a part of the program from early in the history of the school.

It is possible that due to the loss of medical school faculty and declining revenues the graduate student program may have been discontinued. Reputable and responsible Mobile physicians divided the medical coverage at the City Hospital on a three-month rotating basis.

Documents show that application for internship approval in 1930 was denied by the Council of Medical Education and Hospitals of the AMA. Approval was withheld because: "1) The statistics indicate the autopsy percentage is far below the Council's requirements. 2) The laboratory director is not a physician. 3) Continued attention must be paid to the records particularly in the direction of progress notes and consultation reports."

The next application was rejected in 1935 because "the hospital had not yet demonstrated ability to abide by the 15 percent autopsy requirements, and the supervision and teaching . . . does not compare with



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1. National Interagency Council on Smoking and Health. *The Smoking Digest Progress Report on a Nation Kicking the Habit.* 1977.

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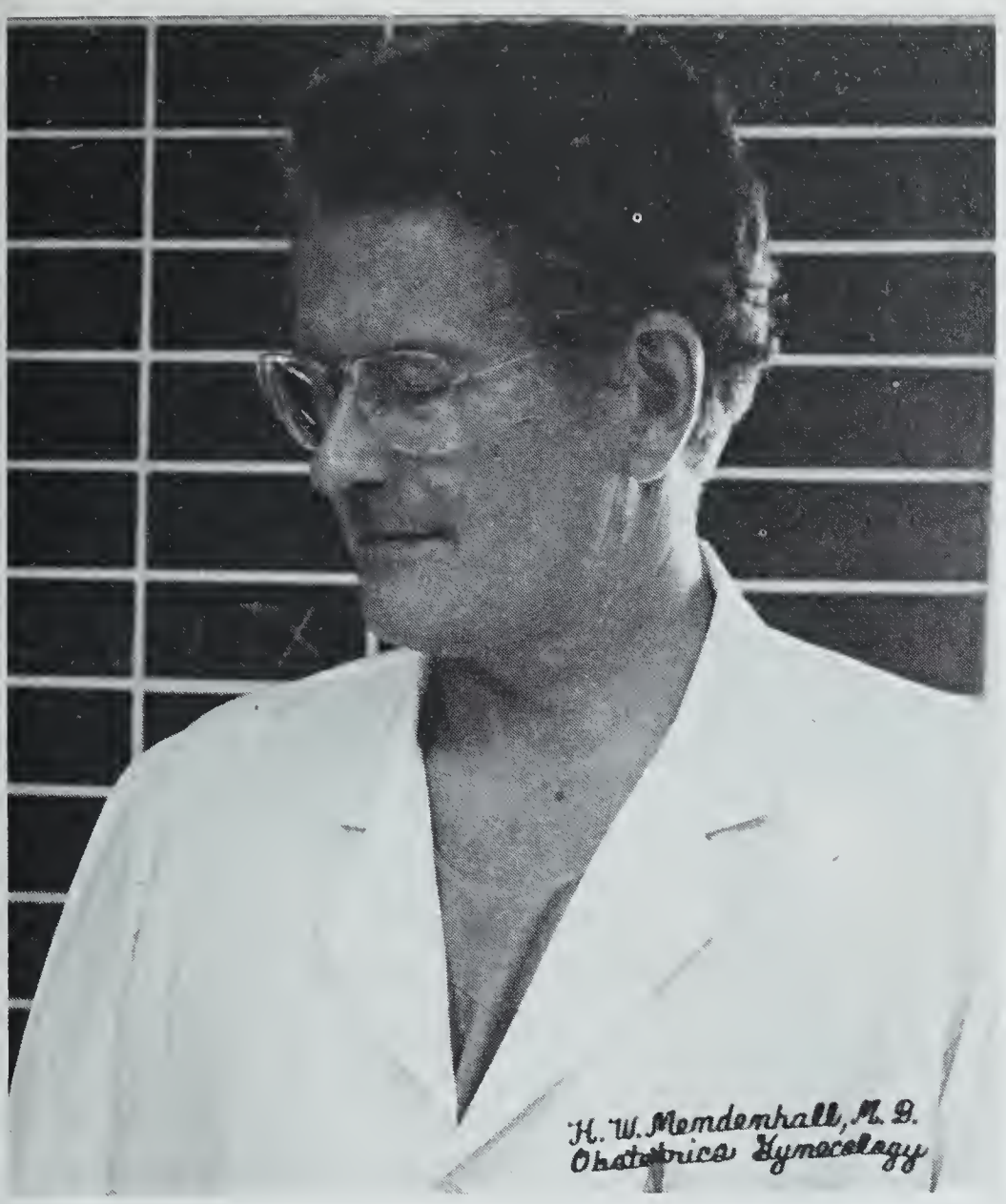
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continued on page 64



Dr. Hiram Mendenhall, chairman of the Department of OB/GYN.

approved hospitals.'' The previous deficit in the laboratory was corrected since I. M. Wise, M.D., was now on board as director of laboratories and also as director of radiology.

The next inspection documented in hospitals files was 1939. At this time there were three interns, one of whom, Dr. Socrates Rumpanos, practices surgery in Mobile, and another, Dr. Woodrow Eddins, practices in Monroeville. It is not clear from available documents whether approval was granted at this visit but the next year there were five rotating second-year interns, each having served the previous year at Charity Hospital (presumably in New Orleans.)

By the late 1940s there was an approved orthopedic residency program, and shortly thereafter, surgery and pediatric residency programs were approved.

The educational efforts of the 1940s and 1950s were spearheaded by the pathologists and radiologists. However, there was a great interest in conducting these training programs among the local physicians. At considerable cost in time and without remuneration the local practitioners conducted sound educational programs in medicine, pediatrics, surgery, orthopedics and obstetrics. This type of medical education in the best Hippocratic tradition was influential in the generation of the necessary community support for the establishment of the medical school at the University of South Alabama.

As the programs enlarged in the 1950s and 1960s and requirements changed, a number of geographic fulltime educators were retained by the hospital. Among these were Drs. Rhett Walker, C. Williams Daniels, Lori Campbell and Hollis J. Wiseman as directors of medical education.

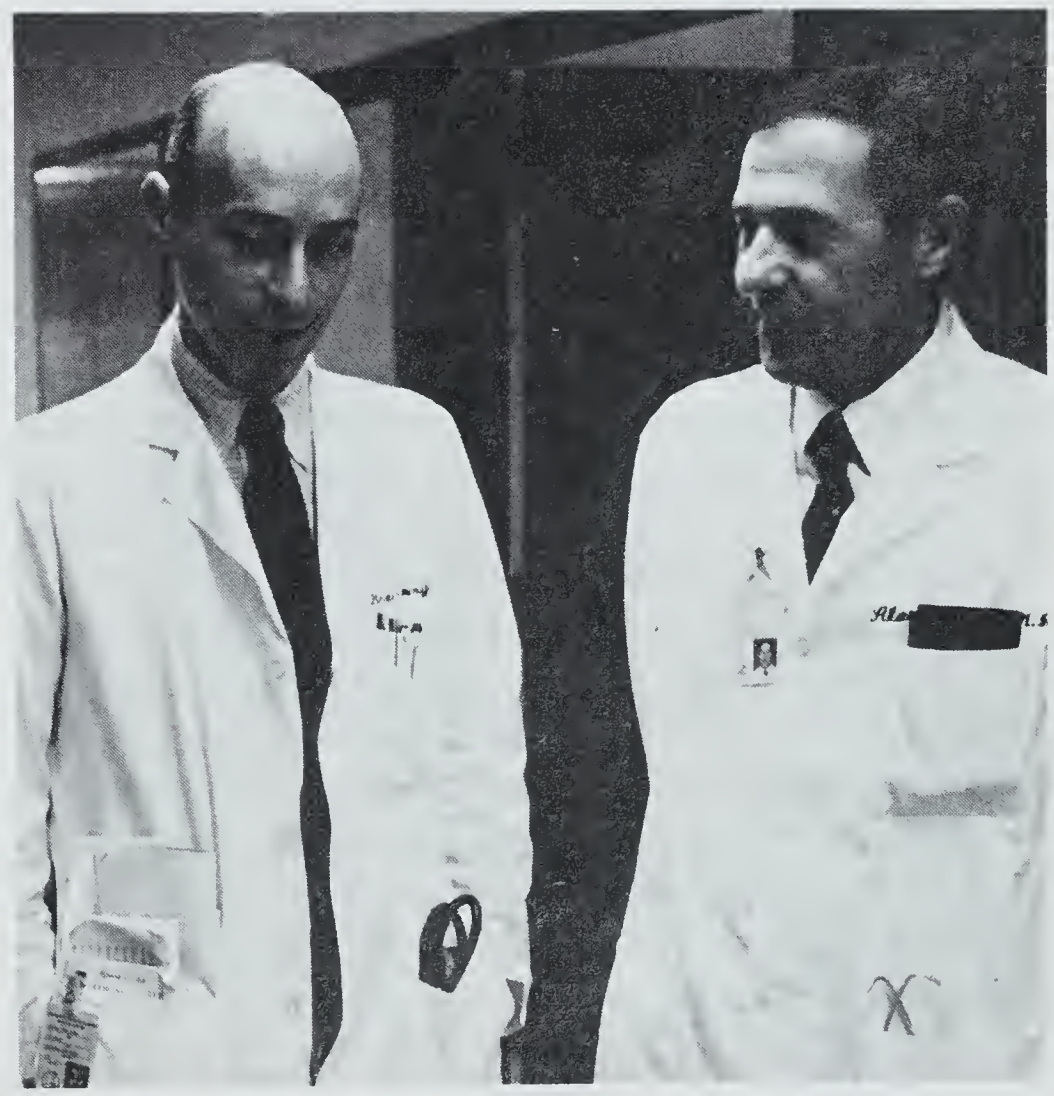
In 1967 Dr. Hollis Wiseman and Dr. Jerry Jordan became geographic fulltime co-directors of Pediatric Education and in addition, Dr. Jordan developed a cardiac laboratory.

A list compiled in 1973 has 467 graduates of the intern and residency programs. Since then, with further development by the University, this number has naturally greatly increased. A cursory search through the Mobile County Medical Society directory reveals over 70 physicians practicing here who have had part or all of their training at the Mobile — City-County-General — Hospital or the University of South Alabama Medical Center. In addition, a number of the early trainees now have sons who are leaders in the profession.

Graduate Medical Education Today

In 1970 the University of South Alabama was deeded the Mobile General Hospital and re-established a formal graduate medical education program that had begun in Mobile with Alabama's first medical college in 1859.

Combining the advantages of community, county or city and university hospitals, USAMC serves as the community hospital for the general area of Mobile. USAMC is the Southwest Alabama Regional Referral Center — Trauma Center — for thirteen surrounding Alabama counties. Patients with interesting and acute medical problems constitute the major percentage of the patients admitted to the teaching service.


Dr. Robert Kreisberg, chairman of the Department of Medicine and Dr. Alan Siegal, professor, Department of Medicine, University of South Alabama College of Medicine.

Educational programs are under the auspices of the University's College of Medicine and the Clinical Department Chairmen. There is a complement of highly dedicated, fulltime academicians and volunteer faculty whose primary responsibilities and objectives are for furthering the educational programs of the institution. All members of the housestaff have immediate access to the full-time faculty on an emergency basis, as well as to the heavy educational input by the faculty on a planned basis.

Joining Dr. Robert Bucher, the dean of this new medical college, the fulltime faculty began to arrive in July 1973. Initial graduate programs began. Internal Medicine was under the chairmanship of Robert Kreisberg. Surgery was chaired by Arthur Donnovan. Pediatrics was headed by Hershel Bentley. Obstetrics and Gynecology was chaired by Hiram Mendenhall. Al Lewis was appointed chairman of Pathology. Charles Schopfner was chairman of Radiology. Henry Mullins was chairman of Family Practice and Michael Kehoe, chairman of Psychiatry. Table I charts the growth of these graduate programs from 1973 to 1982.

GRADUATE PROGRAMS

		1973		1982	
		PG-I	RESIDENT	PG-I	RESIDENT
(1974)	MEDICINE	6	10	10	21
(1974)	SURGERY	7	18	6	13
(1974)	PEDIATRICS	1	2	4	11
(1974)	OB/GYN	1	7	3	13
	PATHOLOGY			2	8
	PSYCHIATRY			3	3
	NEUROLOGY			0	4
	RADIOLOGY			0	13
	ORTHOPEDICS			0	7
	FAMILY PRACTICE			6	11

Table I

Medicine

The Department of Internal Medicine has developed into a graduate program dedicated to producing highly trained and well-informed, comprehensive-care internists who can function effectively, both in primary care and consultant capacities. The department is still under the chairmanship of Robert Kreisberg.

The first-year program in Internal Medicine is categorical. That is, all of the content of the program falls entirely within the discipline of Internal Medicine. Ten categorical first-year positions are available in Internal Medicine. Eight categorical positions are available in each of the second and third years of the program. A limited number of positions at the fourth year level are also available.

Surgery

Under the leadership of P. William Curreri, the Department of Surgery is becoming one of the finest graduate programs in the nation. The USA Medical Center is approved for a five-year general surgical residency. There are six first post-graduate year positions available. Three of these appointees complete a one or two-year training program in general surgery prior to entering a specialty surgical program. The remaining appointees will be accepted to complete the entire general surgical residency program. An approved residency in orthopedic surgery participates in recruitment at the post-graduate year level. The orthopedic surgery program is chaired by Dr. Lewis Anderson.

The goal of the graduate education program is a surgeon with a broad background of experience for community surgical practice.

Pediatrics

The Department of Pediatrics at the USA Medical Center offers a training program designed to educate primary-care pediatricians who will have the ability to give excellent patient care, utilize physician extenders, and be capable of recognizing speech, audiological, behavioral and learning disorders. The department is under the chairmanship of Robert M. Suskind and vice chairman, Vipul N. Mankad.

Each pediatric resident has patients who are given continuing, longitudinal care over three years of training. The training includes emergency room experience, inpatient and nursery experience, and extensive experience in ambulatory pediatrics in primary care as well as subspecialty areas.

OB/GYN

Under the chairmanship of Hiram W. Mendenhall the Department of Obstetrics and Gynecology has grown to include several subspecialties. The residency program is currently four years. It is approved at the present time for four positions at each of four post-graduate years.

A specialized faculty, a large and varied patient population, and excellent clinical and laboratory facili-



Dr. Lewis Anderson, Chairman of the Department of Orthopedic Surgery.

ties permit a balanced education in all phases of obstetrics and gynecology.

The division of Perinatal Medicine is increasingly active, serving as a focal point for referral of high-risk patients both from within the community and throughout south Alabama.



Kathleen Pajer on rounds at the USA Medical Center. Dr. Pajer is now a psychiatry intern at Dartmouth.

Pathology

Under chairman William A. Gardner, the Department of Pathology offers a training program that is flexible with the intent of tailoring the residency to the individual. Anatomic, clinical, experimental, pediatric and neuropathology training are offered.

University-sponsored positions number 12. Residents may enter the program directly from medical school, from other residency programs, after training in other specialties or from positions in the practice of medicine or research. Training may be directed toward Board eligibility in anatomic and/or clinical pathology, as well as most subspecialties.

Radiology

The Department of Radiology offers a categorical first year of graduate medical education. The four year diagnostic radiology residency program covers all aspects of general diagnostic radiology with ample subspecialty elective opportunities. There is a three-month rotation in Nuclear Radiology as well as training in other areas of related imaging such as Diagnostic Ultrasound and Computed Tomography. All rotations are performed under the direct supervision of the Radiology faculty at the USA Medical Center, where there are 17 modern radiographic or related imaging rooms performing approximately 75,000 procedures annually. The department is chaired by Arvin E. Robinson.

Family Practice

The Department of Family Practice, under the chairmanship of Henry Mullins, offers a three-year residency program. The program is approved for six positions in each of the first, second and third years of postgraduate medical education.

This is a pure University program, the Resident Selection Committee pays particular attention to evidence of the applicant's commitment to the principles of family practice as well as evidence of proven, outstanding interpersonal skills.

Psychiatry

Under the chairmanship of Michael Kehoe, the Psychiatry program offers positions for the first postgraduate year and three for each of the next three years of General Psychiatry. The department offers a categorical first year of graduate medical education (internship). The program includes four months in Internal Medicine, two months in Emergency Room Medicine, two months in Neurology and four months in Emergency Psychiatry.

The program is eclectic and avoids slavish adherence to any one theoretical approach. It includes, for example, biological, behavioral, psychodynamic and social systems concepts and applications.

Neurology

The program in clinical neurology offers three positions for neurology resident training at each of three years of residency program. The residency program begins in the second postgraduate year. The first postgraduate year, the internship, is not specifically offered by the department, but may be arranged through the Department of Medicine.

The three-year residency program includes experience in adult and child neurodiagnostic procedures, including neuroradiology, emergency room, private service and outpatients. Jay Mohr is chairman of Neurology. ⊡

Continuing Medical Education at the University of South Alabama

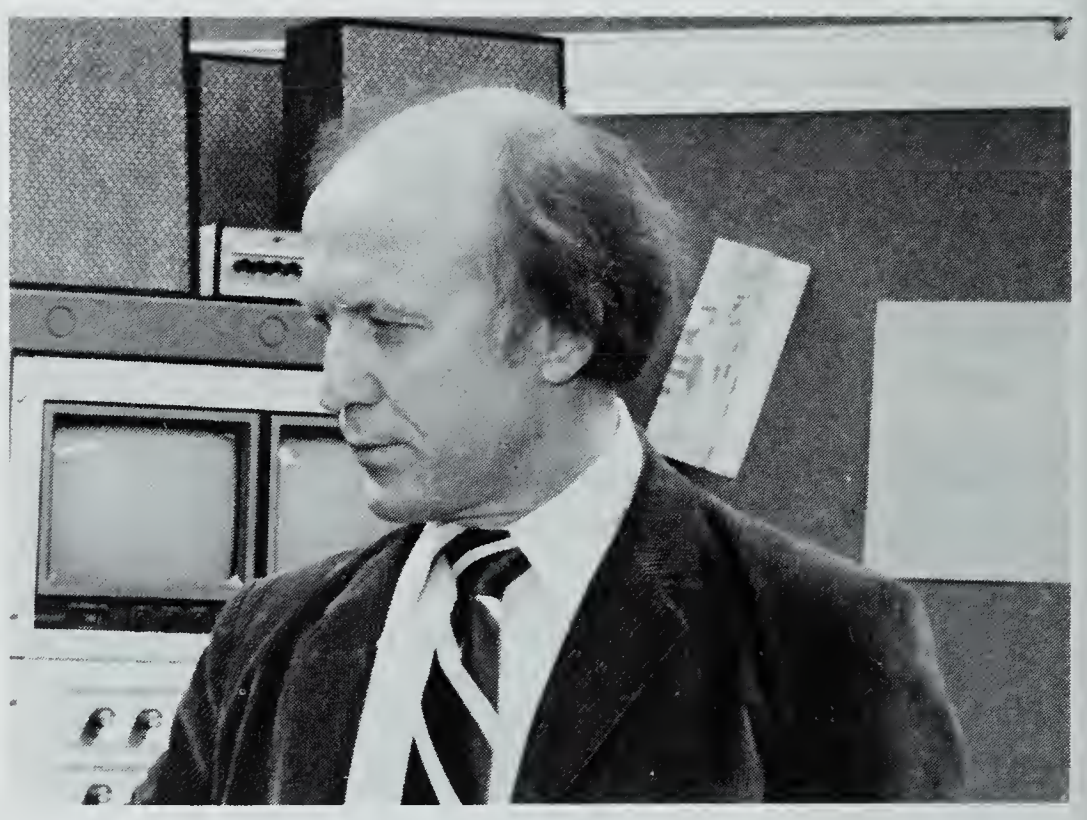
B. G. Brogdon, M.D.
Assistant Dean for Continuing Medical Education

In 1974 Samuel Eichold expressed his concern to acting dean Arthur J. Donovan that burgeoning requirements for physicians to accumulate accredited and verified continuing medical education necessitated an institutional program to accommodate them.

This prescience was rewarded by Donovan's creation of an Office of Continuing Medical Education in the College of Medicine with Dr. Eichold as Director. Dr. Eichold served in that position with great energy and distinction until October 1981. Under his leadership the College of Medicine received provisional accreditation from the AMA in 1975 and, subsequently, full accreditation from the Liaison Committee for Continuing Medical Education in 1978 as an institution fully approved for continuing medical education.

The acquisition and maintenance of such accreditation (now under the aegis of the Accreditation Council for Continuing Medical Education) for the University of South Alabama remains one of the most important responsibilities of the office. Further, the Office of Continuing Medical Education is concerned with accommodating the needs of regional physicians to acquire professional refreshment through education experiences of high quality. In meeting this obligation, the Office of Continuing Medical Education, with the College of Medicine's Committee on Continuing Medical Education, is involved in a wide variety of programmatic activities.

Every effort is made to coordinate our activities with other CME providers in the state. There is no spirit of competition between agencies or attempts to aggrandize the office. Expensive duplication of available programs is avoided when possible. For instance, a recent budgetary retrenchment resulted in our abandonment of a telephone hot-line consultation service in favor of the splendid state-wide services provided by the MIST program at UAB. Similarly, we have no plans to enter the field of medical publication.



Wilmer E. Baker, Ed.D., assistant professor in Family Practice is an active member of the continuing medical education program at USA.

The USA Office of Continuing Medical Education operates with modest funding and a small staff, but with a large commitment to meet the needs of the institutions, physicians and people of the region it serves. ⊡

Special Programs

Alan Siegal, M.D.
Professor, Department of Medicine

In addition to the development of the usual educational, patient care, and research programs typical of most medical schools, the past decade has seen the development of special programs representative of expertise of the growing faculty of the University of South Alabama College of Medicine. These special programs provide a wide variety of benefits including research, education and patient care in areas not generally available outside the academic setting. The University of South Alabama is proud of these programs and continues to add new programs each year.

Genetics Outreach Program

The South Alabama Regional Genetics Program conducts outreach activities which address clinicians, nurses, health professionals, and the public at both service and educational levels to encourage the diagnosis, treatment and prevention of birth disabilities. This outreach program was cited in 1981 as one of the best in the nation.

Clinical Pharmacology Research Unit

The University of South Alabama created a six-bed Clinical Pharmacology Research Unit (CPRU) in its hospital. The CPRU is used primarily, but not exclusively, for pharmacologic research.

Rural Family Practice Program

Since 1976 the department of Family Practice has been involved in the development of medical programs for rural communities in the southern part of the state. A telephone communication and air transportation network has been established and is an indispensable element in carrying out the programs of: continuing medical education, medical student preceptorships, rural family practice residency experience, population based research, and medical consultation and referral.

As a result of these activities, a large number of medical students are being exposed to rural practice, a high quality of medical education is being delivered to physicians in their own communities, rural physicians are participating in significant research activities, and consultation and referral is more readily available to these areas.

Trauma Center

The University of South Alabama Medical Center is the Governor-designated Regional Referral Center of southwest Alabama. It is the designated Medical Control for a thirteen county area of 14,000 square miles and 750,000 people. The fully-staffed emergency department sees over 45,000 patients a year and houses the central console for the RTSS (Radio Telephone Switching Stations) communications and telemetry network.

Pediatric Surgery

Pediatric surgery became a recognized surgical subspecialty in 1975 when the American Board of Surgery offered, for the first time, a board examination for special competence in pediatric surgery. Since then, pediatric surgery has grown into a well respected surgical subspecialty caring for the surgical problems of patients falling within the pediatric age group. In August of 1981, the University of South Alabama established its division of Pediatric Surgery. The Division of Pediatric Surgery at the University Hospital provides surgical care for infants and children suffering a variety of diseases. Newborn surgical birth defects are cared for in the Neonatal Intensive Care Unit. Older infants and children suffering catastrophic illness are cared for in the Pediatric Intensive Care Unit (PICU). The PICU also houses the Pediatric Trauma Unit.

Perinatal Unit

Staffed by two obstretricians and three R.N.s, this unit is responsible for obstetrical and gynecologic ultra-

sound examinations and for education of housestaff and others in ultrasound. In addition, all fetal testing procedures are carried out in this unit. The unit functions not only in an educational but in a service capacity to the university community proper and to the outlying physicians and their patients.

Reproductive Endocrine Laboratories

This unit is located on the main campus and consists of four laboratories under the direction of Edward Diamond, a Ph.D. endocrinologist. Steroid and protein hormonal assays, as well as receptor assays are performed. Two endocrinologists, Dr. Sezer Aksel and Dr. Herbert Weibe, work directly with the laboratory. Assays performed in this laboratory are utilized in research and patient care.

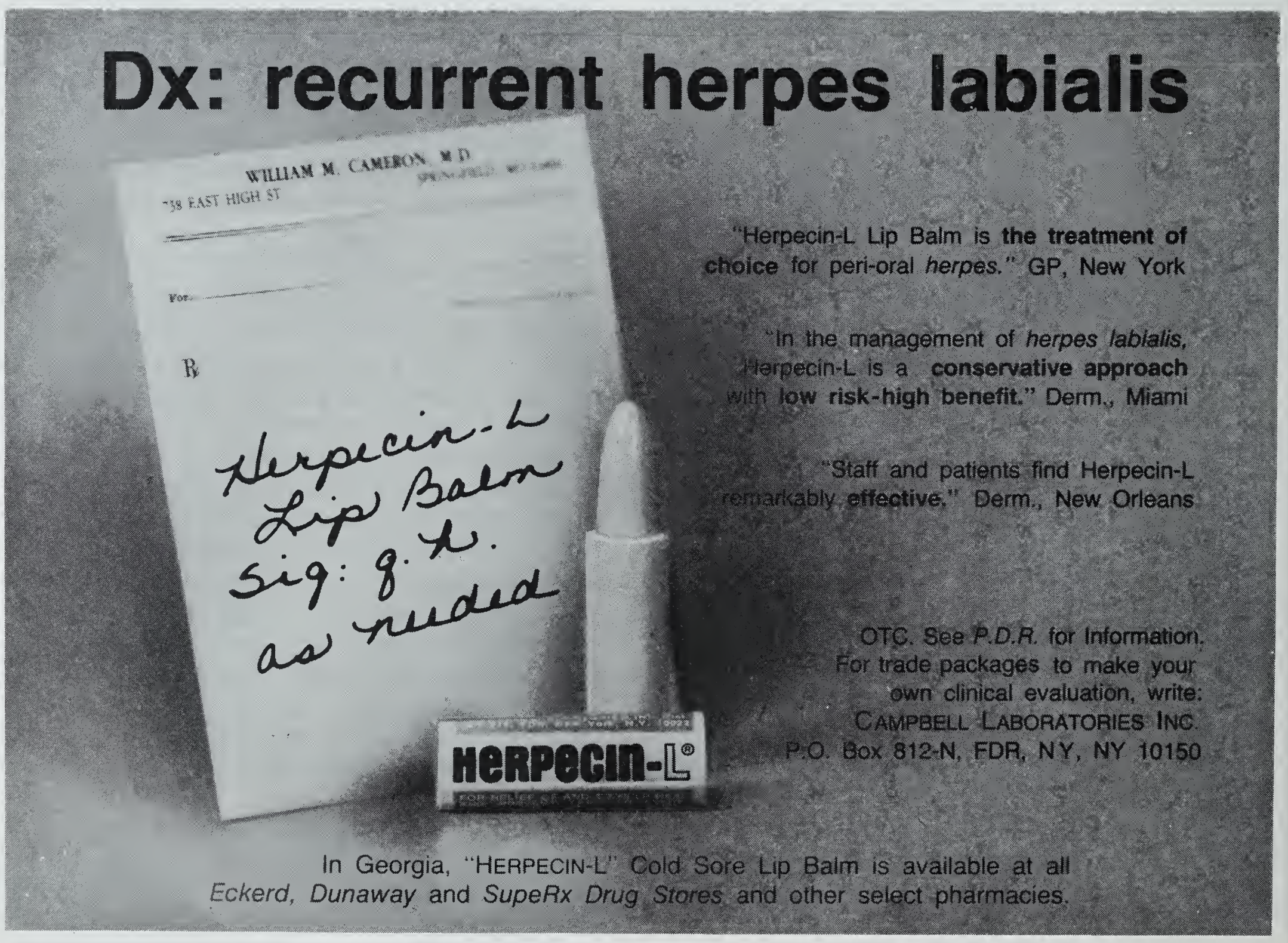
Cancer Center

The Cancer Center was developed within the Clinical Sciences Building on the main University campus for the tertiary management and care of oncology patients. It is a regional resource and referral locus for unique problems in radiation therapy, radiation physics, treatment planning and cancer patient care management. It can provide complete professional support to any hospital based radiation therapy facility within the medical care region of southwest Alabama and the adjacent Gulf Coast. It is a center for cancer control information and therewith participates in the education of all interested parties and apprises itself of cancer related research activity in the region.

The Radiation Treatment Area centers around a 20 MEV linear accelerator. This is a radiation unit capable of both high energy photon and electron therapy for deep penetration and precise beam definition. It is selectively utilized in curative radiation therapy, particularly in tumors that are deep-seated and are in close proximity to other critical organs. It is a rotational unit which is highly automated and proven to be of clinical reliability. A lower energy cobalt 60 unit provides both curative and palliative radiation therapy in a manner suitable for patients' comfort and well-being.

Behavioral Pediatrics

The Behavioral Pediatrics Clinic is designed to address the needs of children with behavioral and/or learning problems. Common types of problems include: discipline, noncompliance with parental requests, learning difficulties, enuresis, and encopresis. Other problems have included psychological difficulties associated with medical illnesses such as diabetes, cystic fibrosis, asthma and sickle cell disease. ⊡



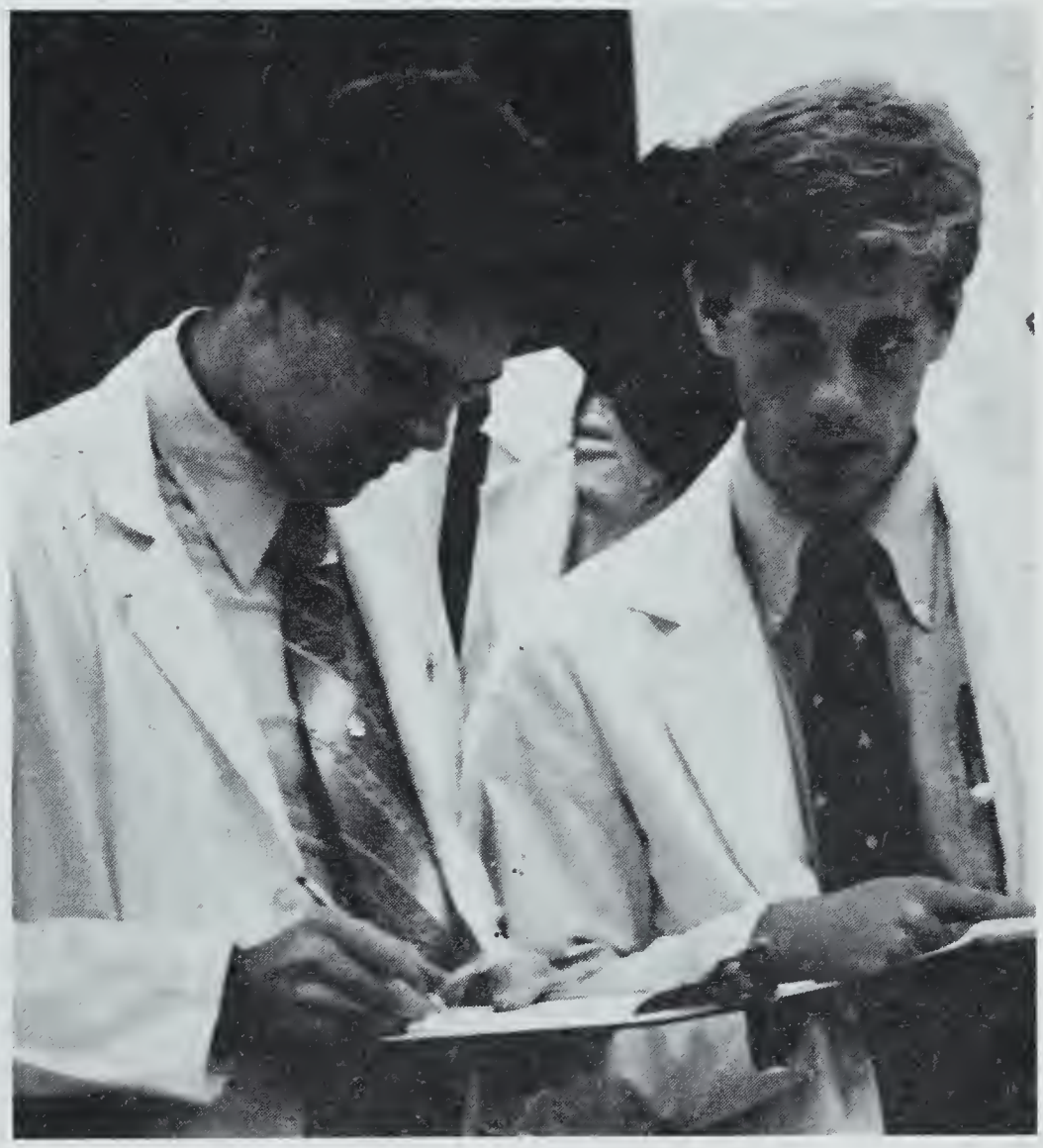
Graduate Education in the Sciences Basic to Medicine

Edwin R. Hughes, M.D.
Director
Basic Medical Sciences

The University of South Alabama College of Medicine initiated a program in June 1978 leading to a Ph.D. in the Basic Medical Sciences. This five year program required that all students pass a core curriculum which included the six Basic Medical Science courses taken by medical students. Following the completion of the core, the student spends three years in discipline oriented coursework and research leading to the Ph.D. in Basic Medical Sciences with specialization in Anatomy, Biochemistry, Microbiology/Immunology, Pharmacology, or Physiology.

The philosophical underpinnings of the University of South Alabama College of Medicine encompass the concept of small high-quality programs in medical education. Unlike those major and massive comprehensive health science centers which have evolved since the late 1950s, it is widely accepted among the faculty and administration of this college that our future is predicated on quality as opposed to quantity. Therefore, the programs which are developed must be first-rate in all aspects. This philosophy leads to the development of the program leading to the Ph.D. in the Basic Medical Sciences outlined in detail below.

It is our conviction the medical scientist of the future must have a broad base of knowledge in addition to his in-depth training in his area of specialization. This will provide a superior background for teaching and approaching the disease problems being investigated today. One can cite a widely accepted truism that the great unsolved problems in human biology must be approached and will probably be solved by the generalist. The leading edge of scientific inquiry must now approach those vast areas which include the more complex problems of growth, development, population control, aging, cancer, stroke, brain function, natural defense mechanisms, hormonal function and heart disease. Unquestionably these areas all require and will continue to require the specialist; however, it is equally



USA College of Medicine students

apparent that the complex interrelationships of these problems will also require a new breed of scientist.

In the past, attempts to deal with the need for broadly trained individuals varied. One prominent and popular approach has been postdoctoral training in diversified fields. More commonly this route leads to increasing specialization. Further, it rarely, if ever, involves the second major objective of the proposed program, preparation for teaching responsibilities. Of course, a scientist can broaden his outlook in teaching and research by self-study. The outcome of this approach is extremely variable, potentially inefficient, and largely dependent on the individual's motivation.

The graduate program in the basic medical sciences at South Alabama is designed to produce graduates with training and knowledge in basic human biology equivalent in scope to a physician's, but who in addition have in-depth knowledge and research skills in an area of specialization in one of the basic medical sciences equivalent to that of graduates of traditional Doctor of Philosophy programs.

It is the policy of the admissions committee that all qualified applicants be considered without regard to race, color, creed, nationality, sex or residency. Because the program is designed to accept students after completion of their third undergraduate year, as well as after completion of the bachelors degree or any degree beyond that level, it is apparent that applicants will be considered who vary widely in background preparation.

The Ph.D. program in the Basic Medical Sciences has been divided into three phases: Phase I — Core Curriculum; Phase II — Graduate Curriculum; Phase III — Candidacy for the Doctor of Philosophy degree.

Phase I of the program, occupying 21 months, consists of a course oriented basic medical curriculum presenting the six major courses required for the M.D. degree in the College of Medicine. This broad base of information is supplemented with courses from other disciplines (Philosophy, Mathematics, English, etc.) to produce a scientist with the background needed to be productive in the future.

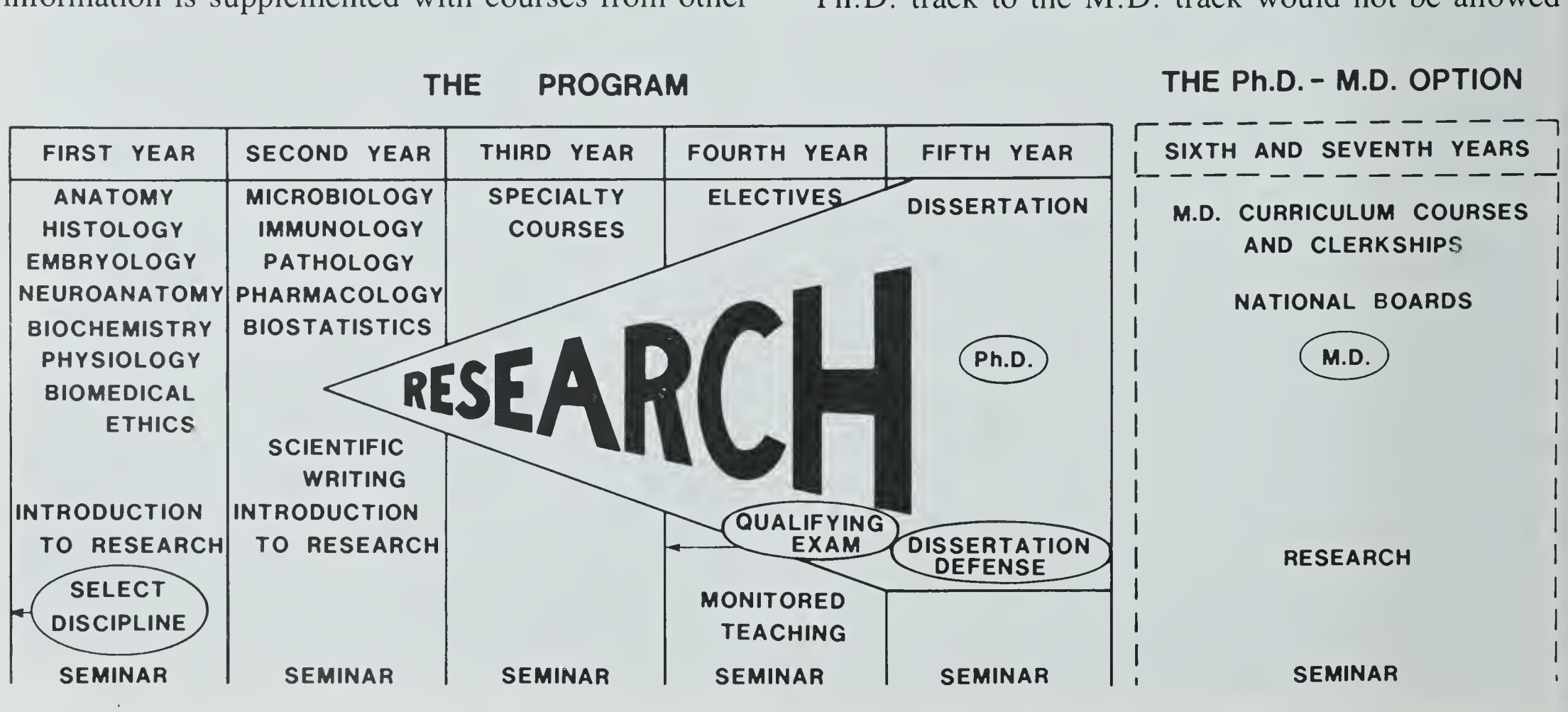
During Phase II of the program, the student has specific requirements regarding courses, seminars, laboratory studies, directed studies and research in the selected area of specialization. The hours of specialized graduate courses are determined by the student's department. A special effort is made to develop individual programs which enable the student to achieve his career goals. The quality of the student's program and his performance are emphasized and are considered as important as the fulfillment of requirements.

Phase III of the program provides time for completion of original research, writing a dissertation and submitting the information obtained in a peer reviewed journal for publication. The latter is a specific requirement prior to awarding the Ph.D. degree.

In summary, the program is designed to identify students early in their educational experience who are interested in careers as biomedical scientists. The curriculum provides for in-depth training in a specific discipline after receiving coursework in all of the basic medical sciences. The goal of this program is to produce innovative, productive biomedical scientists and teachers.

Because of a perceived national need, a Ph.D.-M.D. program was approved by the Board of Regents of the University of South Alabama in 1982.

The basic plan is as follows: 1) Identify three students for admission to the Ph.D.-M.D. program in 1982, and three students each year thereafter. These students would be in addition to the 64 M.D. track admissions each year. 2) To allow highly qualified students in the Ph.D. track to complete the M.D. degree. 3) To provide the option for students admitted in the M.D. track to transfer to the Ph.D.-M.D. program after completing the COM II year. Transfer from the Ph.D. track to the M.D. track would not be allowed



prior to completing the Ph.D. degree requirements. We feel strongly that there should be no ''back doors'' in this program to obtain only the M.D. degree and that all students admitted into the M.D. track should be fully qualified Ph.D. scientists motivated to conduct biomedical research as a career.

This proposed Ph.D.-M.D. program would provide a small number of outstanding students the opportunity to complete both the Ph.D. and M.D. degree in a seven-year span. This would provide a group of trainees with in-depth research training and the M.D. degree. These individuals could then complete a residency and be prepared for a career in research and teaching without further postdoctoral training. The program will provide additional opportunities for our own students and help meet national needs for clinical faculty in medical schools and biomedical scientists to carry out the clinical research of the future. This approach is entirely feasible and has an excellent prospect for successfully fulfilling its goal of bringing well trained biomedical scientists into this active research arena.

The Basic Medical Sciences faculty is responsible for conducting the teaching program for medical and graduate students in the basic medical science years. At present, 41 fulltime faculty provide the equivalent of 56 quarter hours of instruction during the first core year and 40 quarter hours during the second core year for graduate students (15 per class). This same faculty provides instruction in most of these courses to 64 medical students. All members of the graduate faculty are expected to seek extramural funding to support research and graduate student training. New faculty are provided small intramural grants by the College of Medicine or the University to initiate their research activities.

Our first decade in the College of Medicine at South Alabama has been exciting and productive. The primary mission of a college of medicine is to provide a sound basic education for our undergraduate medical students. The Ph.D. and Ph.D.-M.D. programs allow us to fulfill an equally important responsibility — to advance knowledge through research and to contribute to the development of teachers and investigators through advanced degree programs in the basic medical sciences. The first group of Ph.D. students will graduate from the University of South Alabama in June 1983. ⊡



The electron microscope is explained to COM I students.

Pinworms work the night shift



Artist's interpretation:
The nocturnal egg-laying of the female pinworm causes acute perianal itch...making children shift sleeplessly through the night.

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one dose against pinworm and roundworm—in both children and adults—Antiminth is easy-to-administer and easy-to-take.

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Usage in Pregnancy Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions

Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions

The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

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Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

References 1. Pitts NE, Migliardi JR: *Clinical Pediatrics* 13:87, 1974. **2.** Modell W: *Drugs of Choice* 1980-1981. C. V. Mosby Co., St. Louis, 1980, p. 362. **3.** Goodman LS, Gilman A: *The Pharmacologic Basis of Therapeutics,* 6th edition, MacMillan Publishing Co., Inc., New York, 1980, p. 1032.

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Volunteer Faculty

Robert M. Bucher, M.D.
Professor, Department of Surgery

For many years the city of Mobile enjoyed graduate medical education because of the dedication of volunteer faculty. Even after the original medical school was moved, interest in medical education continued and graduate education in internships and residencies in multiple specialties continued because of the efforts of the practicing profession in the community. Indeed, it was the efforts of the practicing profession as expressed through the County Medical Society that stimulated the interest in creating a medical school in Mobile. This effort antedated the University of South Alabama.

When the decision was made to organize a college of medicine under the aegis of the University of South Alabama, there were in existence training programs in the major specialties which allowed the school to start in a record time, probably the shortest time from decision to institution of the first class of any school in the country.

There are two characteristics worthy of note when one refers to the volunteer faculty activities. The first of these is that at least one third of the practicing profession participated actively in the educational process. The second is the unique characteristic which is associated with the open staff tradition which existed in Mobile.

This latter characteristic led to an unusual set of circumstances. Teaching was concentrated at the Mobile General Hospital. At this site physicians participated actively in teaching interns and residents, while in other hospitals there were no graduate trainees in medicine. This is unusual since many places in the country had residency programs in existence in any hospital which considered itself to be a first-class institution.

Another characteristic which is of interest is the fact that there never was an attempt to fill all the graduate educational places if there were not enough qualified applicants. If one looks back at the 1950s and 1960s, many institutions in the country felt it necessary to fill all of their positions and did so by utilizing foreign medical graduates if there were not adequate numbers of qualified American graduates. This never occurred in Mobile. If there were not adequate qualified American graduates, the training positions were not filled.

The contribution of the volunteer faculty to the growth of the College of Medicine cannot be overestimated. When the College began it was necessary to obtain basic scientists in order to begin the first class rapidly. However, in order to minimize the difficulties in obtaining qualified clinical faculty on a full-time basis, the clinical departments were organized into

divisions in order that volunteer faculty could provide the clinical instruction for the charter class of students. This organization was a temporary one and was ultimately abandoned in favor of the more traditional departmental structure, but it was the activities of the volunteer faculty which enabled the provisional accreditation of the school to occur and to begin the charter class at an early date.



Dr. Robert M. Bucher, the first dean of the new college, is now actively involved in new professional endeavors – that of the full-time practice of medicine on Dauphin Island. He continues to participate in the educational programs in the department of Surgery at USA as clinical professor of surgery.

Activities of the volunteer faculty have obviously diminished somewhat since the beginning of the school and the obtaining of a cadre of full-time clinical faculty. However, in the minor disciplines (minor in terms of importance to medical student teaching), the volunteer faculty continue to be the mainstay of the instruction. Neither time nor space allows the enumeration of all of those who participated and gave freely of their time. However, suffice it to say that the support of the local profession was a key in the organization and beginning of the school and still continues to be an important aspect of it. The questions which remain for the future are related to how much of the significant teaching load can be carried by volunteer faculty and in what disciplines will it be necessary or appropriate to form graduate educational programs since these programs are more likely to require the heavy input of time which requires that the faculty be compensated to make up for their loss from practice earnings during the time expended in teaching. ⊡

The University of South Alabama Medical Alumni Association

Samuel Eichold, M.D.
Professor, Department of Medicine

When our college of medicine had become established, the vision, faith and enthusiasm which had been fused into its creation became transferred to new goals for fully developing this fledgling institution. One goal was to forge a bond of pride between our graduates and the institution where they had trained — a Medical Alumni Association. It was realized that a college of medicine is often judged by the quality of its graduates, that organizing such graduates into an alumni group would contribute to attracting quality students in the future, and finally, that a medical alumni association would be a source of strength and support for the college of medicine.

Support for an alumni association came not only from University officers and faculty but also, importantly, from physicians who had taken their graduate training at the hospital which became the University of South Alabama Medical Center and who consequently felt a bond of special loyalty to the new school. These physicians became organizing members of a formative medical alumni body which was coordinated by the Office of Student Affairs under associate dean, Clyde G. Huggins, and the Office of Continuing Medical Education, then directed by Dr. Sam Eichold.

The University of South Alabama Medical Alumni Association is composed of more than 300 men and women. All graduates of the College of Medicine automatically become members. Each graduating class meets for its first reunion five years later and every five years thereafter. This reunion culminates in the gathering of the total membership of the Alumni Association for the annual meeting. Education is involved at each class reunion.

The arrival of Dr. Stanley Crawford as dean served to further strengthen the University of South Alabama Medical Alumni Association. Since early in 1981, Virginia Harr has served as executive secretary and has effectively organized the continued activities. ⊡

Directions for the Future

Stanley E. Crawford, M.D.
Dean, College of Medicine
Vice President for Medical Affairs

The relations between a college of medicine and the world it inhabits are invariably uneasy and complex. The present may cause us to recall Ogden Nash's dictum, "Progress might have been all right once but it's gone on too long."

Previously, national medical goals were achieved in spectacular fashion. The number of medical graduates increased from approximately 9,000 a year in 1970 to more than 15,000 by 1980. The nation's practicing physicians increased from 155 per hundred thousand population to 202 in 1980 with distribution of medical care to smaller communities being achieved.

A second national objective, to increase the number of primary physicians, has been achieved. A third objective, to give students from low income families a chance to become health professionals, has been addressed through student loan programs largely underwritten by federal funds.

Medical education and colleges of medicine are caught in a squeeze between rising education costs and declining federal support. In Alabama, state financial restraints caused by the recession add to the severity of the situation.

The fiscal 1983 federal budget amounts to a devastating attack on medical education. This trend began long before the Republicans assumed power in January 1981. Its results are that a greater portion of the cost of education must be borne by students and state governments.

In the coming years if we are to successfully bridge the transition from being heavily dependent on federal support to greater self-sufficiency, we must constantly evaluate what we are about and have clear, long-range plans. We must avoid both complacency and resignation to the status quo, and be wary of making instant decisions that could compromise our future.



Stanley Crawford, M.D., dean of the College of Medicine and vice president for Medical Affairs at the University of South Alabama.

There is a place in American medical education for the contributions of a small college of medicine with programs directed toward the production of the medical generalist as well as the physician subspecialist. We feel that the University of South Alabama makes this contribution and is uniquely capable of serving the Gulf Coast region as well as the state.

We look forward to continually strengthening our already active research program. We need to add faculty, particularly in the clinical disciplines, and we will be developing new programs as we develop new resources.

Within a university a college of medicine has a unique mission; to enhance the health of those who look to it for care. Because of this, we are attempting to upgrade our Medical Center Hospital. The state of Alabama and Mobile County, as yet, do not provide adequate support to the hospital. The current economic depression, resulting in an increasing indigent patient load, has severely taxed our resources. In spite of this, we continue to provide quality patient care and student education.

The promise of the College is bright. We do not plan to increase class size. We will not increase student tuition or student fees unless absolutely necessary, and we will remain sensitive to the needs of the moderate and low income student, thus assuring a broad mix of physicians to serve the state.

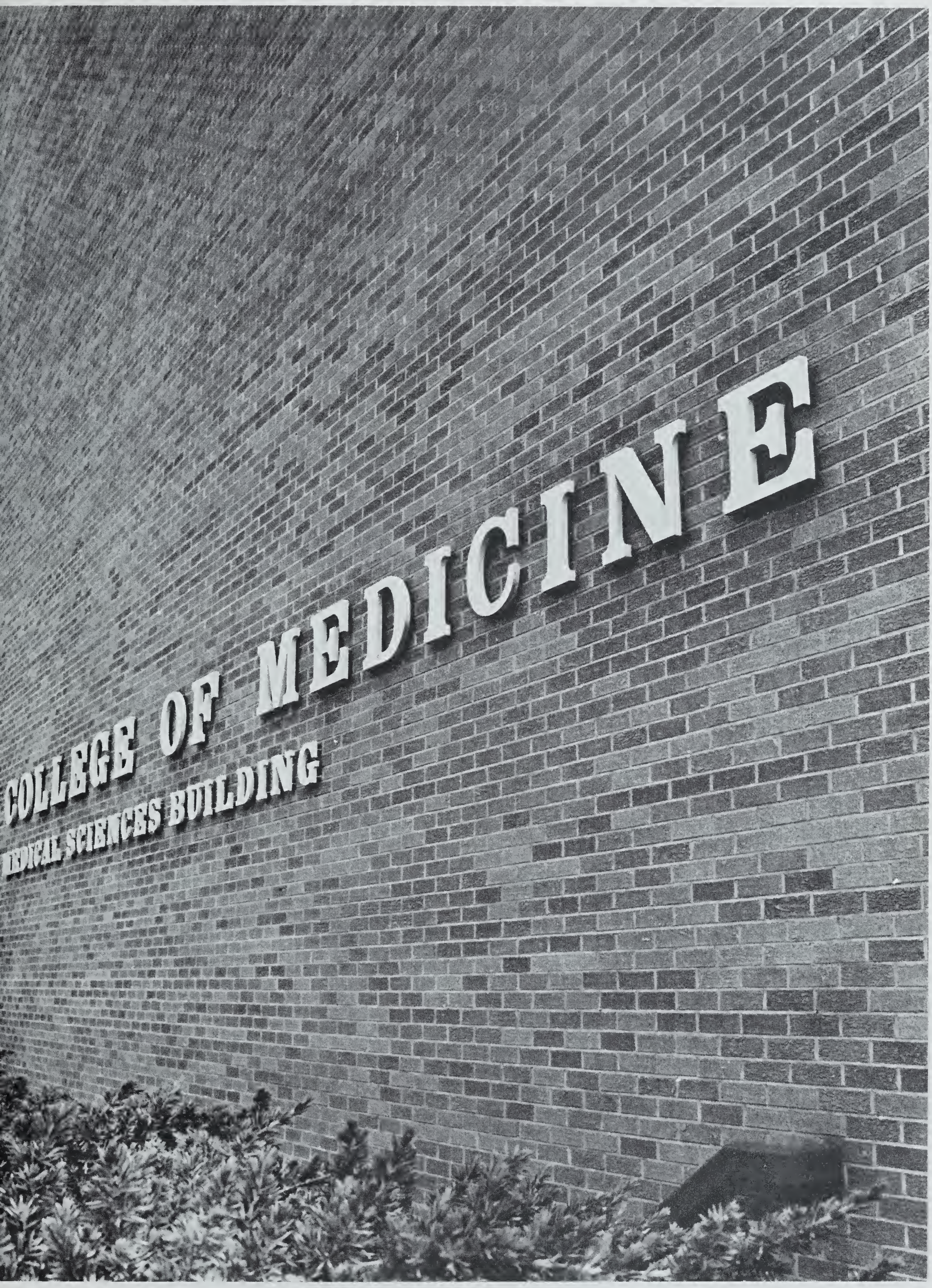
There is an air of excitement and progress upon our campus. Our ultimate strength is in the productivity of our faculty and the quality of our students. ⊡



Expansion at the USA Medical Center is creating facilities to house the State Department of Forensic Sciences and the department of Pathology at USA.



The Class of 1986, College of Medicine, University of South Alabama.


COLLEGE OF MEDICINE
EDICAL SCIENCES BUILDING

President's Page

continued from page 7

ity of risk and benefits. In order to survive, the traditional third party payor must become more innovative in helping change the way health care is paid for and where it is delivered.

The medical profession is a potential fifth force in the large arena. At the present time, however, the physicians of this country are fragmented, disorganized and poorly prepared to make the profession a significant force determining the future of American medical care.

There are ways that physicians can have input. Organized medicine is the traditional route. It is absolutely ridiculous that fewer than 50% of the active physicians in this country belong to the American Medical Association. The AMA is the only effective organization articulating the opinions of private practitioners at the federal level. However, organized medicine must be more uniformly supported if our national leaders are to continue to recognize physicians as an effective political force.

But the most effective input available to physicians is at the community and hospital level. Through business/medicine coalitions we can and should have input into such things as plan designs for insurance coverage as well as developing cost effective modalities of treatment such as preferred provider organizations. For many reasons the business/medicine liaison is a natural. With no conflict of interest, private practitioners can deliver quality medical care in settings other than the hospital when appropriate.

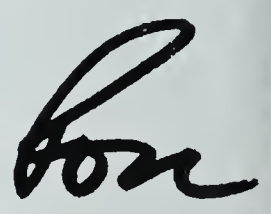
But business coalitions may not wait on physicians. We must seek them out and offer our cooperation before they make other arrangements.

In addition, physicians must increase their effectiveness at the hospital level. We should become more involved through long range planning committees, executive committees, and when the opportunity presents, as an effective equal among equals member of the board of trustees of the hospital.

The time is past when the physician can select a community in which he or she wishes to live, open an office, and expect to be successful.

In the uncertain times just ahead we must interface with many segments of society, while not forgetting the main purpose of our professional existence — to be the patient's advocate in all areas. The patient's needs must be met, and if this is accomplished, the patient will insist that he maintain the freedom to choose his physician.

If we are not successful at the patient level, all or any combination of the suggestions given above will not save the independent practice of medicine. ⊡



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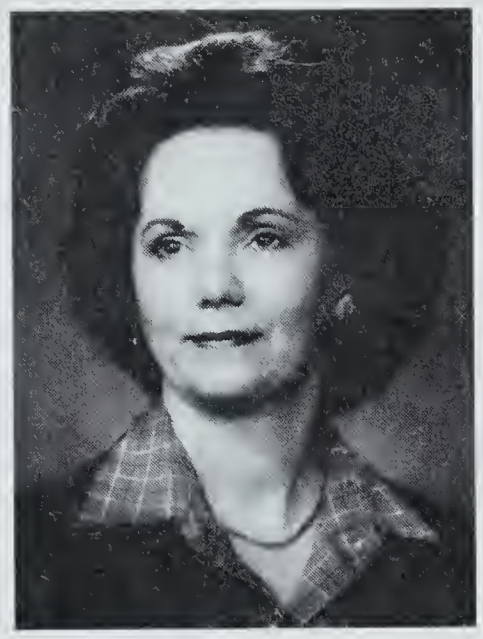
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Doctor, Practice What You Preach

The American Medical Auxiliary in its Shape Up for Life Campaign published a pamphlet "Make Good Health a Habit." May it serve as a reminder to you to take time out for your own good health.

You've heard the messages: Don't smoke, Don't drink. Don't overeat. Don't be lazy. Don't stay up late. Don't speed. Don't skip breakfast.

Maybe you've ignored one or more of them — and you're not dying. In fact, you're not even sick. You feel fine. So why all the fuss?

Because good health habits are up to you. They can make you feel better and live longer. They can give you more energy for your family, your friends, your interests. And staying healthy will cut down on those costly visits to the doctor to cure the results of your bad habits.

As Donald M. Vickery, M.D., and James F. Fries, M.D., write in *Take Care of Yourself,* "If we could eliminate all unhealthy habits, what would happen? Lung cancer and emphysema would almost completely disappear; death due to all cancers would decrease by 25%, cirrhosis of the liver would become a rare disease; peptic ulcers, gastritis, and esophagitis (inflammation of the stomach and esophagus) would decrease in frequency; massive upper GI hemorrhage (bleeding from the stomach) would be unusual; pancreatitis (inflammation of the pancreas) would be rare; elevated blood pressure would be less common; atherosclerosis (hardening of the arteries) would decrease in frequency; and accidental injuries would become less frequent. Without the help of the patient, medicine can make no such promises."

Healthful living is your life and your responsibility. Whether you're 13 or 30, 45 or 60, research has confirmed that it's never too soon or too late to change your ways. The time to start is now.

It takes discipline. It takes good habits. It takes following some simple rules like these.

Eat three meals a day at regular times, and no snacking. Be sure you're getting foods from all four nutrient groups — milk, meat, fruits-vegetables, and bread-cereal. And no skipping breakfast — you may eat more than you should later in the day.

Get moderate exercise two or three times a week. It will help you feel better, control weight, maintain a healthy heart and blood vessels, as well as give a good outlet for relieving tension. Ask your doctor what kind — and how much — exercise is best for you.

Get adequate sleep. It's a great restorative, and it doesn't cost anything. Seven or eight hours a night is enough for most people, though some adults find they feel best with only five or six.

Maintain moderate weight. Being too skinny or too fat isn't good for you. Get down or up to the weight that's right for you — and stay there.

Use alcohol in moderation. Alcohol is no substitute for healthy ways to relieve tension and enjoy yourself, and too much is hazardous to your health. If you use it at all, use it sparingly.

Learn to manage stress. Stress can be friend or foe — a motivator if used the right way; a problem if it gets out of control. Life will never be completely free of it, so learn to manage stress and make it work for you.

Don't smoke. It's hard to give it up if you already do, but your health is worth it. Smoking has been called "America's preventable public health enemy number one." You don't need it. Don't do it.

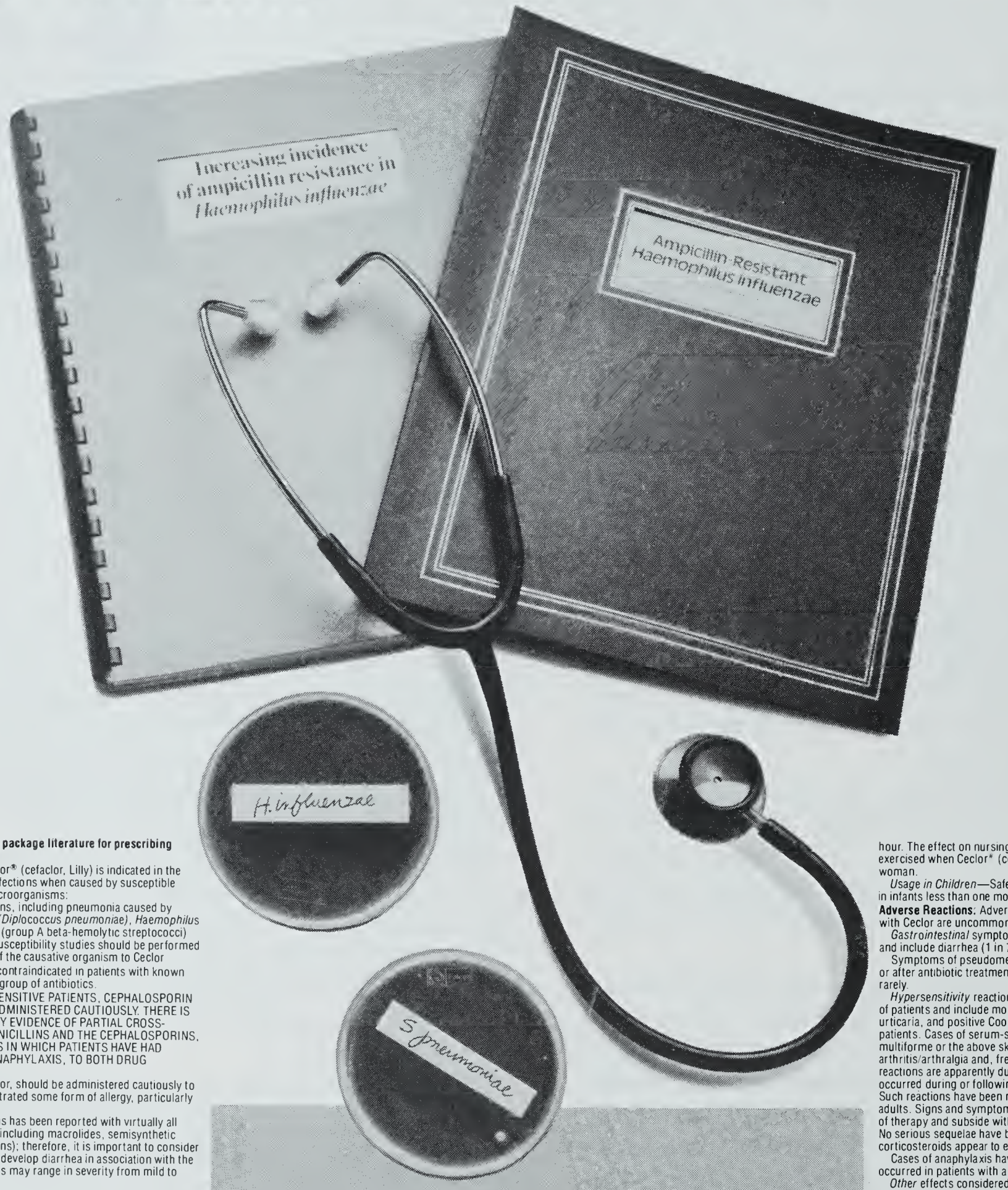
Decide which of these habits you need in your life. Then put them into your daily routine. You'll feel better and live longer.

So make good health a habit. Shape Up for Life.

This pamphlet was prepared and distributed as a public service by the American Medical Association Auxiliary, Inc. For other pamphlets in the Shape Up for Life series, write AMA Auxiliary, 535 N. Dearborn Street, Chicago, Illinois, 60610. ⊡

Patty

An added complication... in the treatment of bacterial bronchitis*



Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

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Brief Summary. Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae,* and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile.* Other causes of colitis should be ruled out.

Precautions: *General Precautions*—If an allergic reaction to Ceclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed

Nursing Mothers—Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor® (cefaclor, Lilly) is administered to a nursing woman.

Usage in Children—Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below:

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician

Hepatic—Slight elevations of SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[0617B2R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae.*[8]
Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever See prescribing information.

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

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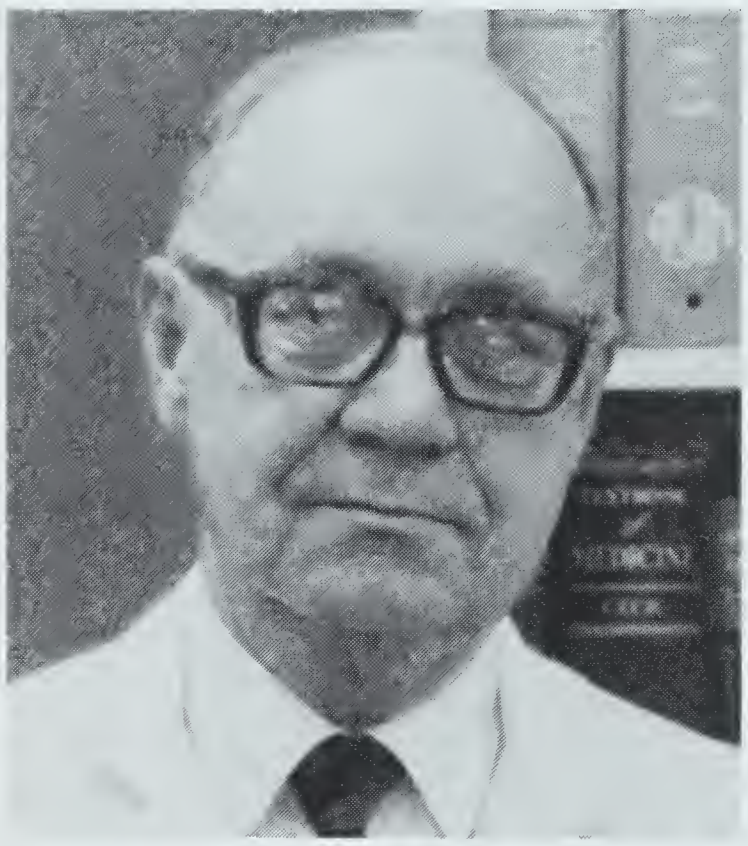
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A long way from Bishmizzin

Page 8

"THE PHYSICIAN IS A DECISION MAKER, AND ALMOST EVERY DECISION HE MAKES COSTS OR SAVES MONEY."

—Dr. William Felts, Past President, American Society of Internal Medicine



More and more physicians today are beginning to realize the extent of the economic influence they have, and are finding ways of holding costs down.

A number of studies show that the more physicians *know* about costs, the more they try to *reduce* them.* And this reduction can be done without reducing the quality of care to the patient.

How are they doing this? As a start they have become thoroughly familiar with the costs they incur on behalf of their patients. They know how much an X-ray costs, how much their hospital charges for routine lab tests. They're requesting copies of patients' hospital bills. And asking their hospitals to print the charges for diagnostic tests right on the order sheet.

What else are physicians doing? Minimizing their patients' hospital stays, whenever possible. Reevaluating routine admissions procedures. Questioning the real need of the diagnostic tests they order for their patients. Avoiding duplicate testing. Trying to discourage their patients' demands for unnecessary medication, treatment or hospitalization. Compiling daily logs of their medical decisions and what they cost. And more.

More physicians today realize what a tough problem we're all faced with. They know this is a challenge for medicine. And that physicians are in the best position to deal with and solve the problem.

**PATIENT CARE Magazine—Outlook 1977, "Face-Off: Cost Containment vs. Chaos," January 1, 1977.*

Lyle CB, et al. "Practice habits in a group of eight internists," ANNALS OF INTERNAL MEDICINE 84 (May 1976), 594-601.

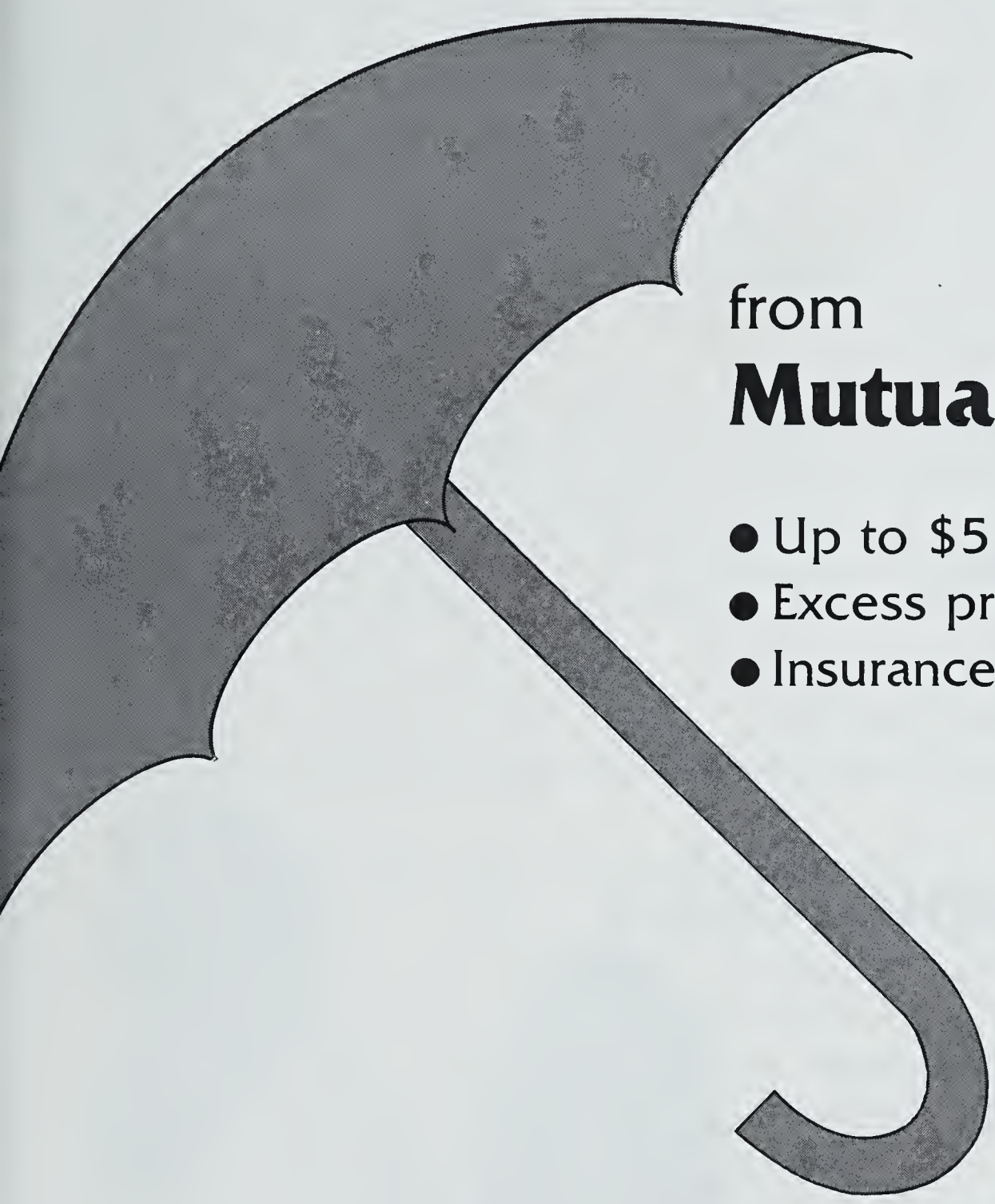
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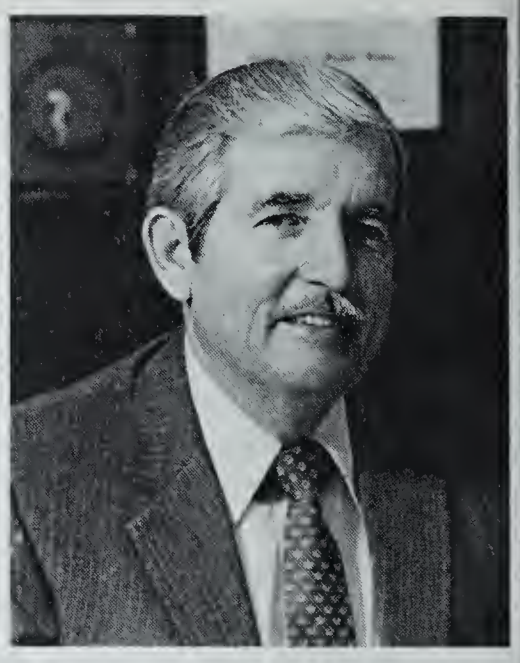
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EXECUTIVE DIRECTOR



S. Lon Conner
Executive Director, MASA

The Corporate Challenge

A controversial new book on the changing economics of medicine is certain to figure in much of the 1983 debate on the subject.

The Social Transformation of American Medicine, by Harvard social scientist Paul Starr, attempts to go back into history and trace the evolution of the modern health care ''industry'' from its roots in the 19th century to what it has become and into what it is evolving.

It is his thesis, hardly surprising in itself, that physician power over that vast health care system is shifting to the medical industrial complex of profit-making companies — and, moreover, that this is happening at a spectacular rate.

Among the ''investor-owned'' enterprises (for which read, ''in business for profit'') already firmly entrenched are conglomerate-owned chains of hospitals, nursing homes, dialysis centers, diagnostic laboratories, pharmacies, medical office buildings, ambulatory surgical centers, shopping mall emergency centers and others.

Mr. Starr believes, as do others, that the public demand for greater economies is attracting these giants with their economies of scale denied the small, independent operation, whether that operation is a hospital or a physician group. Although he is less than enamored with the present state of things, believing with many other critics that something had to give, he is not comforted by the prospect of the corporate take-over of medicine. Curiously, the physician who reviewed the *Social Transformation of American Medicine* as the lead article in *The New York Times Book Review* is much more sanguine about that prospect. This may be partially explained by the fact that the reviewer, H. Jack Geiger, M.D., is a professor of community medicine at CCNYU and therefore may not be as wedded to faith in the independent practice of medicine as are most American physicians.

In any case, Dr. Geiger agrees with the author that the corporate health care system is now well under way and that many American physicians are participating in that movement, thus reducing the effect of doctor opposition by dividing the professional ranks on the question. And they also agree the years ahead will see increasingly intense struggles between physician and physician, between the physician and the hospital, between the hospitals struggling to survive and beat other hospitals, and between all of them and the federal government, to say nothing of the battles between the giant corporations themselves.

Mr. Starr, although critical of the present, is fearful of the future. Some of his anxiety obviously arises from the traditional fear among academicians of big business, and conglomerate medicine is already big business. But some of his concern also derives from his conviction that assembly line medicine by standardized chains is not likely to be what the doctor ordered for this country.

There are physicians on all sides of the argument, as revealed in a structured debate on ''Corporate Care: Threat of Challenge'' in the *Internist,* published by the American Society of Internal Medicine. In a recent issue, physicians presented impassioned views for and against the prospect of corporate medicine, with Editor William Campbell Felch, M.D., positioning himself somewhere in the middle ground.

In an accompanying signed editorial, Dr. Felch commented:

''At first, it seems to be a straightforward good guys/bad guys scenario. On the white horse is the virtuous but beleaguered doctor, dedicated to caring for his patients on a one-on-one basis, his principal concern being quality. The villains of the piece, trying to muscle their way into health care territory, are the big business barons who preach a collective, corporate catechism and whose principal concern is for dollars and the bottom line.

''As usual, real world people turn out to be more

continued on page 35

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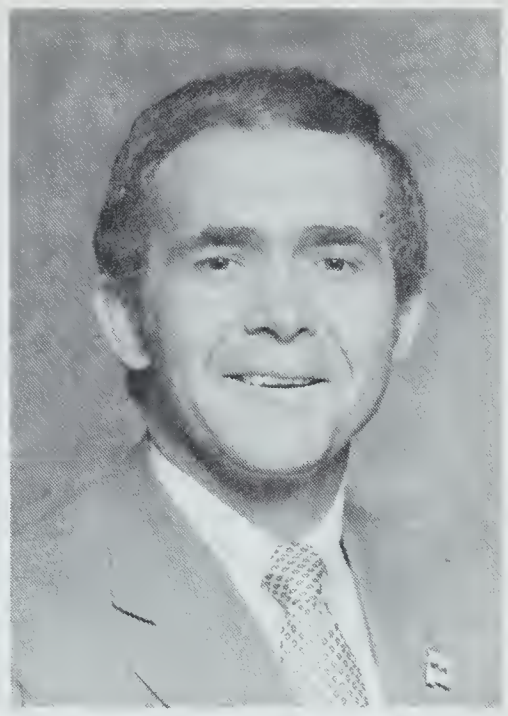
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PRESIDENT'S PAGE



Ronald E. Henderson, M.D.
President, MASA

Call to Concerted Action

If you are like me, you get awfully tired of people telling us what you should do with the precious time medicine leaves you for your own discretion. The world is full of noble causes, and each wants some of your time.

With that apologetic preface, I am about to tell you what *I* think you should do, if you are not already doing it. I think you should become seriously involved in organized medicine. And there's no better way to begin than to join us next month in Birmingham for our annual meeting. We have an excellent program, but perhaps even more beneficial to you will be mixing and exchanging views with your fellow physicians from all quarters of the state.

The changes in our science and technology are occurring by exponential leaps. Tremendous advances in technology have become commonplace and expected. Similarly, the external challenges facing our profession, and the threats to its very existence as an independent entity, are doubling every six months, it seems.

Consider just the developments in the short timespan of my term as president, since last April. The Federal Trade Commission, for a time seemingly content with reconnaissance raids on medicine, broke out the battle flags for a full-scale offensive in 1982, going so far as attempting to brand into the nation's law its claimed right to oversee our profession.

If that comes to pass, the doctor-patient relationship would be relegated, in the government's eye, to the level of ordinary commerce. While we succeeded, through a massive lobbying effort in Washington, in turning back this usurpation, their own lobbying prevented our getting a clear declaration from Congress for the FTC to keep its heavy hand off medicine. We won in the House, but lost in the Senate.

But declared enemies are often easier to contend with than forces we had every right to suppose would be on our side. Hospitals for example. Through a varity of moves, our friends, the hospitals, are encroaching on private practice. They are opening satellite clinics all over the United States to compete with the private practitioner on his own ground. They are hiring more and more staff physicians from the oversupply coming out of the medical schools, with the undeclared but obvious purpose of going into the institutional, corporate practice of medicine.

As if this were not alarming enough, we have been blindsided by our traditional allies. The Reagan administration we had every reason to believe would be friendly to medicine has given aid and comfort to our greatest detractors. It has supported and promulgated laws and regulations through the monstrous Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982. This fiat goes far toward fee-setting while advancing, ever so cleverly, the philosophy that the prime contractor in medicine is the hospital, not the physician.

Compounding all this, voracious hospital chains and holding companies seem determined to take over what was once the essential social institution in every community and make it a medical A&P. The chains make no bones of their intention to put their hired physicians on production quotas, relieving them of the time-honored privilege and duty of purely medical decisions. When hospital income detemines the standard of care, medicine as we know it is finished. And medicine as our patients have known it is finished.

I believe that the 1980s will be regarded by some future medical historians as the period in which we saved our profession — or, alternatively, the tragic years when we muffed the last chance to do so. If there was ever a time when you could let your fellow physicians man the ramparts in your behalf, that time passed last year. Or the year before.

We need every one of you in this struggle, which I sincerely believe to be the beginning of private medicine's Armageddon. If I didn't, maybe I would be content to let George do it, too. But in the inner councils of AMA and MASA I have been witness to what the future may be if we, like other good men of history, stand by and do nothing.

Please join us in this fight to turn back both the all-out offensives such as that of the FTC and rule-or-

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A Long Way From Bishmizzin

By William H. McDonald

It was graduation night at the Vicksburg, Miss., High School during the Great Depression when a young Lebanese immigrant in the class got the call to medicine.

The call came from his father, who had brought his family of eight to this country a decade earlier, inspired by the same lure that had already made America the Melting Pot of the world — promises of a better life.

Only that night had the father learned his son, born in the old village of Bishmizzin, Lebanon, about 35 miles from Beirut, was president of his senior class. The family had been too busy scrabbling a living at their corner grocery store in Vicksburg to take much note of that.

''You are going to college,'' the father said to the son. ''And you are going to be a doctor.''

''I am?'' the son replied, in what could have been a question but was closer to affirmation, an unquestioning acceptance of his father's wishes. The son had never thought of going to college, had never before that moment entertained the notion of being a doctor — or anything else except his dream, born in the sixth grade, to have a ''small, slum grocery store'' of his own one day, probably in Vicksburg's ''Bucktown.''

The typing and business courses he had taken in high school had all been aimed in that direction. To him, owning his own grocery store was as high as he could aspire. For that matter, who could possibly want more than that? After all, his mother and father and all six offspring had been happy with the family store, living behind it in two bedrooms and working in it from dawn to late at night. It was hard work, of course, but it kept them clothed and fed far better than would have been their lot had they remained in the old country.

''Well,'' the son thought on that auspicious night, ''I'll do what he wants. But after seven years of my life doing what *he* wants, I'll come back and open that store.''

The graduate was Alfred Habeeb — now Alfred Habeeb, M.D., ''Freddy'' to his friends, then and now. He is the senior anesthesiologist in a 12-physician Birmingham group that also employs 35 CRNAs. He holds the American Board's certificate No. 342, meaning that while he was not exactly in on the ground floor of anesthesiology, he was, as he says, ''only a couple of inches above that floor.''

Dr. Habeeb is based at St. Vincent's Hospital in Birmingham, but the group he heads serves three other hospitals in the Birmingham area. A cordial, outgoing man, Dr. Habeeb is famous to everyone but his long-suffering wife for his sometimes outrageous sense of humor. Mrs. Habeeb, Carmen to friends, is the butt of many of his jokes, public and private. Sample:

Q. ''Freddy, why did you wait so long to marry?'' (He was 38 when, as he says, Carmen trapped him.)

A. ''I had to wait 'til Carmen was old enough.''

Laughing on the Outside

But his clowning often masks, he admits, periods of deep depression. He is, by his own admission, a worrier, but he is also an irrepressible optimist, with an unshakeable religious faith.

He never enters the operating room without going to chapel. He never leaves the hospital without another visit there to end his day. Long ago, sitting on the steps of the old Anatomy building at Old Miss, during his medical school days, he scribbled in his Anatomy book this inscription from the Old Testament:

''In all thy ways, acknowledge Him, and He will direct thy path.''

''In the old country,'' Dr. Habeeb explains, ''all you had were church and family.''

The old country was turbulent before and after World War I, as now. Then under the French, Dr. Habeeb remembers that rule as worse than the 640 years of Turkish rule.

''As my dear father would say, we were born to hate a Turk. But the French were worse. They took everything and gave nothing back.''

Father Habeeb regarded himself as eternally British. He spoke with a British accent, was devoted to the royal family and always, even in Vicksburg, dressed like a proper British gentleman.

Before he married, the elder Habeeb sought his fortune in Australia, making two trips there peddling drygoods in the Queensland area, 400 or 500 miles from Sydney. After his second trip, he returned to Lebanon, where he married in his early 30s. He took his bride to Johnstown, Pennsylvania, where he had a cousin. They went into business together. Two children were born in Pennsylvania, but one was sickly. The doctor suggested a warmer climate, sending the Habeebs reluctantly back to Lebanon.

It was to no avail. Edward died of complications from pneumonia and measles. But World War I came along and the Habeebs were not permitted to return to the United States until 1920. It was October of that year when they returned, now a family of eight. Freddy was just a slip of a lad but he remembers their anxiety that the physical exam at Ellis Island would find some reason to forbid their entry into this country. A Middle Eastern eye disease then prevalent was one of the sure reasons for denial of entry. But they all passed the physical.

The chill of autumn found them on the streets of New York City. They had no money and few belongings. A cousin gave his father $100 to get them to Detroit to visit a nephew in the produce business. But winter was coming on. The elder Habeeb knew he could not dress his family warm enough for Detroit's weather. He had a cousin in Vicksburg, Miss., where the climate was warmer and where, he knew a colony of Lebanese from their village had settled earler. They headed south.

In Vicksburg, the elder Habeeb opened a store, which was what he knew best, never to forget two or three local merchants who advanced the loan to make it possible. ''Don't worry, they told my father,'' Dr. Habeeb recalls, ''if you get a chance, pay us back.''

The store opened at five a.m. and closed at 11 p.m. The family lived in two rooms in the back. Alfred Habeeb was in heaven. Even much later, when he was a senior medical student, he would spend his holidays back home happily cutting cheese and slicing meat in the store. Naturally, that was the life for him. Could there be any higher aspiration for a boy from Bishmizzin? Could there be a higher calling for anyone from anywhere?

In Vicksburg schools, Freddy dreamed of the day when he would have his own store, no matter how small, no matter where, so long as it was his. Even today, he confesses, if it were in his power to live his life over, he would repeat it precisely as it has been: Early years in Lebanon, then the corner store in Vicksburg, Mississippi, then medicine.

Humorous Mother

His father was a solemn, serious man, but his mother was touched with a sense of humor that often lightened her life of scrubbing, washing and cooking to keep the family going.

In Vicksburg schools of the period, ''foreigners'' had to be able to fight to survive. Dark-haired Alfred Habeeb was called ''dago'' so many times, he soon learned to slug the boy who was about to call him that even before he spoke. Nowadays that's called a preemptive strike.

He earned his popularity the hard way, and wasn't hurt by his blossoming sense of humor. He played football, or tried, but the player for whom he was a substitute was bigger and better. He rarely got on the field, but he didn't mind. This was America and anybody could play on the team if he could fight his tormentors well enough to get there.

It was no small victory for him that he was elected president of the Junior and Senior classes, even though his father knew nothing of these laurels until graduation night. Maybe Freddy forgot to tell him. Or maybe he had told him and both were busy in the store and his father didn't grasp the implications of the honor.

When his father finally did take notice on graduation night, he was suddenly inspired to new heights of ambition for Freddy. You will go to college, he informed his son, and you will become a physician. Not a lawyer, he reasoned, for in any case between lawyers, one of them must lie. A doctor, and that's that.

Freddy had never thought of college, or medicine, or even of leaving Vicksburg, but his father's wishes were his command.

He couldn't imagine how the family could afford it; or, for that matter, how they would make do without him in the store. But to the business at hand: he picked Mississippi College for his pre-med, a Baptist school at Clinton, Miss., near Jackson, because it was only 40 miles from Vicksburg (a city that has celebrated the Fourth of July only twice in history, because it surrendered to the Yankees on that date in the Civil War).

At Mississippi College he had to work hard, studying unfamiliar subjects. The business goals of high school gave way to science and math, keeping him on the books until late at night. While he still planned to return to own that store, in those days he was singleminded in his determination to follow his father's command for seven years, which seemed an eternity.

He managed a good B average, vowing never to fail because everyone back home was sacrificing too much. Guilt hovered near at hand: here he was off at college

while his family toiled, none of his brothers or sisters having any hope of college themselves.

There were times when he wished their parish priest had convinced his father that the boy didn't need to go to college. That was right after his father's graduation night decision. The priest had summoned up all his powers of persuasion, as if sending the boy off to college was a kind of punishment, a purgatory he didn't deserve. Why, the good priest argued to the elder Habeeb, he's a bright boy, smart enough and strong enough to work in the store. Why send him off to college?

There is the suspicion that Freddy might have put the priest up to that, but Dr. Habeeb denies any influence whatever. In any case, his father had been adamant: a priest must be listened to in matters spiritual, but not temporal. This was a temporal decision and it stood. Case dismissed, appeal denied.

After two years at Mississippi College, where he helped organize a pre-med club and became head cheerleader of the football team (having decided he was too small to play), he toyed with the idea of accepting a bid to join a huge (for the time) freshman medical class at Tulane. Tulane accepted 125 new students, but eliminated 25 of these by the sophomore year. He figured he could make the cut, but Ole Miss seemed to have a better idea. The school at Oxford wouldn't accept him without three years pre-med. He knew he was short on science and they probably knew something he didn't: he needed another year at Mississippi College.

Fading Dream

At Ole Miss medical school, the store dream began to fade. He soon fell in love with medicine, a not uncommon occurrence, and the old dream was soon sublimated into a slightly altered new form (notice the similarities): He would accept the offer of a pharmacist friend of his in Vicksburg, Mr. Rose, who had a drug store with an office waiting for a young doctor upstairs. That was almost as good as a grocery store. In time, it became even better because he realized he could serve the needs of more people by ministering to their bodies than by sacking groceries and slicing cheese. That dream became his new obsession. After finishing the two-year medical school at Ole Miss, he opted for the University of Tennessee, since Memphis (like Clinton) was pretty close to Vicksburg, and he could get back home during breaks.

By the time he was at Tennessee, the store dream vanished, but the drugstore doctor idea was brighter than ever. He would go back to Vicksburg on visits, get up before dawn with the family, and mind the store as in the old days, but with a difference: now he no longer had to come back to that. The drugstore office in Bucktown was close enough.

To get there, he figured, the best preparation would be internship at Shreveport General Hospital, about 180 miles west of Vicksburg, just across the river. But before he did that, he found himself often at the Vicksburg Charity Hospital. As fate would have it, Vicksburg Charity was right across the street from the family store. He would go over there during vacations to work in the clinic and eat pork and beans in the hospital, to save his family a meal across the street.

It was during one of these visits, in the summer between his junior and senior years, that a staff man, a Dr. Roberts, told him he should consider a place in Fairfield, Alabama, the TCI Hospital, instead of Shreveport General. Dr. Roberts had three arguments in support of Fairfield: A charity hospital such as that in Shreveport would be good training, true, and provide a lot of freedom, but you still wouldn't learn to deal with private patients. Fairfield was in between, a big private hospital with many patients. The second reason was the TCI Hospital had as its medical director the famous Dr. Lloyd Noland. Aside from being a great person and physician, Dr. Noland knew everybody in the country in medicine. If you wanted further study, Dr. Noland could open doors for you.

It was Dr. Roberts' third argument, however, that the medical student found most compelling: When your intership is finished, Dr. Noland might have a job for you in his dispensary for a few months, while the other doctor is off on vacation.

"I said that's the place," Dr. Habeeb recalls. "I'll go there and make about $600, buy me a Ford car and drive back and take that little office over the drug store."

First Meeting

Before going back to Tennessee for his senior year, the future drugstore-doctor-with-the-Ford-car wrote Dr. Noland, asking for an interview. Dr. Noland gave him a date, and Freddy came up to seen the redoubtable physician. The student was sitting in a chair waiting for Dr. Noland when an imposing gentleman passed, backed up and asked: "Anything I can do for you, sir?"

Instinctively, he knew this had to be the great Dr. Noland. After a long chat, Dr. Noland told him that "the committee that decided on internships" would not meet until the first of the year to make appointments. Dr. Noland promised to notify him at the appropriate time, shaking hands and wishing him well. Before parting, however, Dr. Noland asked the medical student if he had been around the hospital. "Yes, sir," the student chirped; "Dr. Armstrong took me around." "Then did you like what you saw?," Dr. Noland asked. "I said, yes sir, I sure did."

"Then he asked if I would really like to join them next July, after graduation. I said I sure would. He then said, all right, I'll put you down. Later, I realized that HE was The Committee and it had met between the time he got up and before I reached the door."

Young Dr. Habeeb loved it at TCI, later Lloyd No-

land Hospital. He lived in the hospital for 10 years, resisting Dr. Noland's frequent entreaties to move, with a promise of a raise if he did that.

Dr. Habeeb tried to do everything in the hospital, paying little heed to his scheduled hours, still looking to the day when all that diverse knowledge and experience in every phase of medicine would acquit him well in his practice over that drug store. At TCI, Bryce Robinson, M.D., talked to him about going into anesthesia, but Dr. Habeeb was still interested only in general practice.

However, a deal was worked out with Dr. Noland: If Dr. Habeeb would assist Dr. Robinson in anesthesiology, Dr. Habeeb could stay on another year beyond his internship time. He felt he needed that for his practice back in Vicksburg. Anesthesiology thus became at first only a means to an end: it was his way of buying additional training time. After his anesthesiology work for the day was finished, he worked around in other areas of the hospital as the spirit moved him, sponging up all the experience he could get in all phases of general practice.

He worked with Dr. Wallace Clyde in Pediatrics, Dr. Charlie Wilson in orthopedics, and so on. "I was going to be damned good when I went back to Vicksburg." But that was still his objective, the office over the drug store in Bucktown.

The Winds of War

It didn't work out that way. Dr. Robinson was a captain in the Army Reserve. Even before Pearl Harbor, he had received his orders to report for active duty. Dr. Habeeb had tried to sign up for the reserve while in Memphis, only to discover he needed immigration papers which he had never taken out.

Dr. Noland, figuring he could afford to lose Dr. Habeeb to the Army easier than he could Dr. Robinson, instructed the latter to go talk to his commanding general and see if it could be worked out that Dr. Habeeb could serve as his substitute. Dr. Noland may have remembered that this practice was common in the Civil War.

"We'll let Freddy answer the call to the colors," Dr. Noland told Dr. Robinson, "since he is anxious to go anyway."

The General wasn't buying that. He said, "Captain Robinson, you belong to me now. Go tell Dr. Noland you don't belong to him any more."

That left Dr. Habeeb chief of anesthesiology. He had not had even two years understudying Dr. Robinson, but here he was drafted into full-time anesthesiology. He resolved to make the best of this new turn in his life. Anesthesiology was young then, in 1942. The American Board had come into existence just four years before.

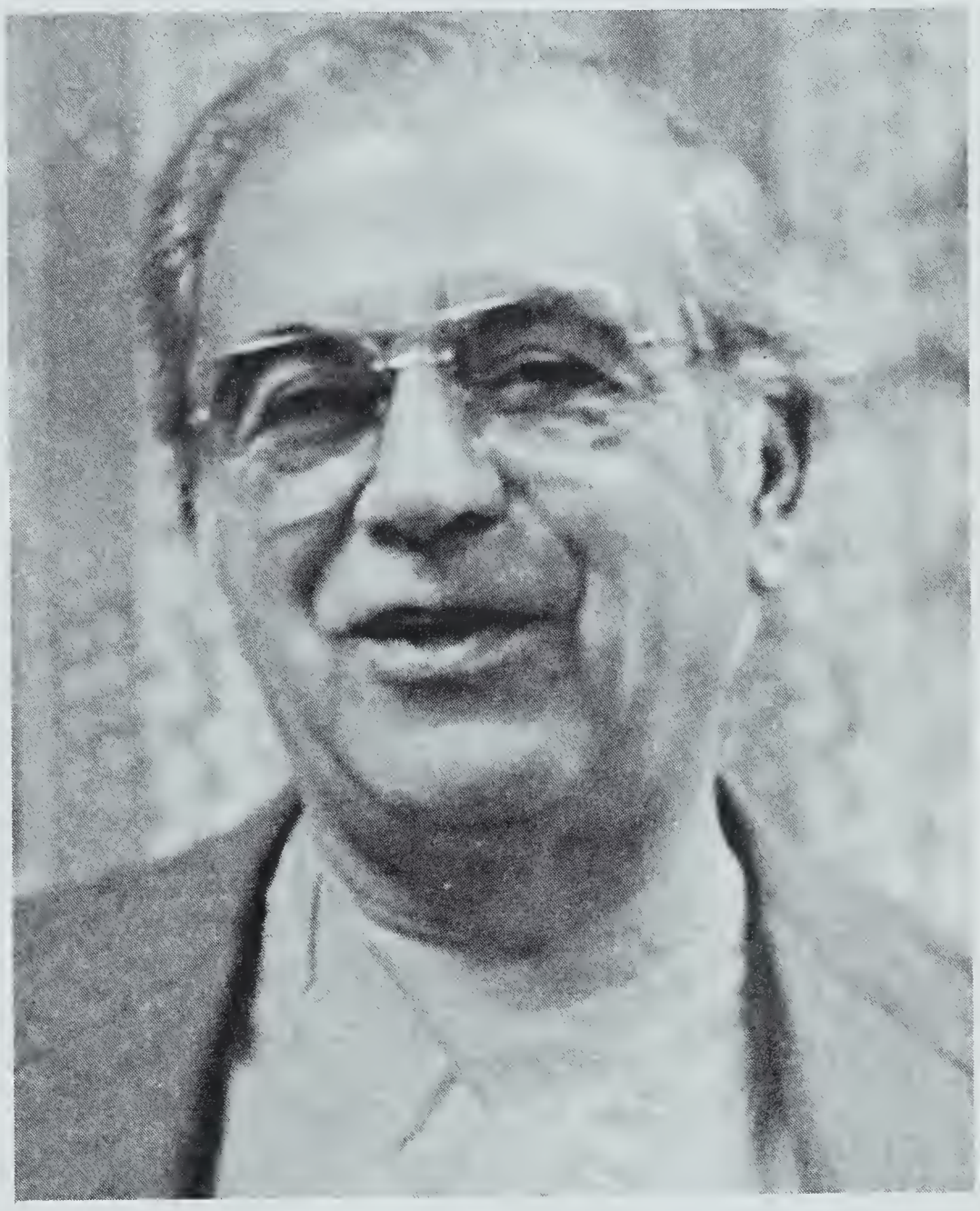
At first, Dr. Habeeb felt this was far removed from the doctor role he had planned. What he had wanted to do was "to touch people, sit down and talk to grandmother, take care of children, and those in between." What made anesthesiology marginally acceptable to him at the time was Dr. Noland: "He made everything big; he gave me the sense of ego I needed."

Soon he was going into town to assist Dr. Noland's surgeon friends in Birmingham. One of the first patients he was called into Birmingham to attend was Senator Lister Hill's father, the illustrious Dr. Hill. Soon, he was being called in for other cases involving special people, in addition to those at TCI.

By this time, Dr. Habeeb had been joined by an old friend, Hiram Elliott, Jr., M.D., who had entered the freshman class with him at Ole Miss. What had been the Robinson-Habeeb partnership became Habeeb-Elliott. At war's end, when Dr. Robinson returned from his military service, it became Robinson, Habeeb & Elliott.

Dr. Elliott's presence permitted Dr. Habeeb to continue his practice of going home to visit the folks every few weeks. Dr. Noland had told him: "My dear boy, go as often as you can; a visit to the old folks is a visit you'll never regret."

During the war, Dr. Habeeb lived in the hospital, often never changing into street clothes for a week or



longer. The hospital was his home away from home. He was to remain there in a room "no bigger than a closet" for a total of 10 years, to Dr. Noland's dismay. "My dear boy," the Boss would say, "if you will move out I will give you a raise."

But during the war, TCI had 25,000 to 30,000 employees, most of them defense workers, and the hospi-



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1. National Interagency Council on Smoking and Health. *The Smoking Digest.* Progress Report on a Nation Kicking the Habit. 1977.

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tal was feverishly busy. The conversion to independent practice "in town" (which meant Birmingham) was gradual. Within a few years after the war Drs. Habeeb and Elliott were busy in town and their TCI work had been reduced to consultant status, while Dr. Robinson stayed at Lloyd Noland and assumed more and more administrative duties piled on him by Dr. Noland.

Thus, the firm became Habeeb and Elliott again; then with the coming of John Alan Stough, M.D., from Montgomery, the trademark firm of "HES" was born — Habeeb, Elliott & Stough. For many years HES was a common sight on the walls of operating rooms. Some hospitals still post HES on the blackboard, signifying that the group has the duty, although today the greatly enlarged Anesthesia Services of Birmingham, P.A., comprises 12 physicians and 35 CRNAs.

Dr Habeeb became a close companion of "the Boss," Dr. Noland, accompanied him on trips around the country, and thus hobnobbed with many of the legendary greats of Medicine. Men like Doctors Frank Leahy of Clinic fame and Arthur Allen, Professor of Surgery at Harvard; Dr. Collier, Professor of Surgery at Michigan; and many others — opportunities he would scarcely have approached had he gone back to Shreveport General. The entré provided by Dr. Noland also enabled him to visit and study the techniques of such notables in anesthesiology as Dr. John Lundy, father of sodium pentothal, who was at Mayo; Dr. Ralph Waters, in Wisconsin, father of cyclopropane; Dr. Rovensteine, at Bellevue; and others.

"At the time," Dr. Habeeb recalls, "you could list the big people in anesthesia on 10 fingers, and it wasn't difficult to visit them all. The contributions they made are the things we are doing today. They were on the ground floor and I was just an inch or two above the ground floor."

After the war, the name of TCI Hospital was changed to honor the man who had made it world famous, Lloyd Noland; and Dr. Habeeb met and married the charming Carmen, who was to begin a lifetime of enduring his barbs, sallies and raillery even while raising the pride of their lives, three sons. Alfred Habeeb, Jr., M.D., is in his psychiatric residency at the University of Florida, Gainesville; Mark is working on his Ph.D., in Advanced International Studies at Hopkins; and Philip has graduated from Southwestern Memphis and is doing graduate work in journalism at UAB.

He Still Goes Home

Dr. Habeeb's father died in 1948, his mother in the late 1950s. But he still goes home to Vicksburg often, usually flying to Jackson where he is met by one of his brothers, "The Colonel," as he calls him. Shouphie Habeeb, who emerged from World War II as a Lieutenant Colonel after an important post in Army Intelligence in Cairo, heads a federal savings and loan bank in Vicksburg. All the Habeeb children are still there,

except for a deceased sister. The father and mother are buried in Vicksburg, along with other Lebanese who established their colony there, so far from Bishmizzin. Dr. Habeeb has been home to Bishmizzin only once, in 1975, but the Colonel was able to visit it often during his tour of duty in the Middle East.

The guilt over all the support Dr. Habeeb received during his training has vanished now, as have the regrets that he never made it back to take up that practice over Mr. Rose's drug store.

From all the travels he made with Dr. Noland in the old days, Dr. Habeeb gravitated quite naturally into the role of alternate delegate for 20 years to MASA at the state level. When he grew tired of that 10 years ago, the Jefferson County Society supported him as alternate delegate to the AMA from the state association, a role he thoroughly enjoys. As devoted as he is to the issues before the AMA House of Delegates, Dr. Habeeb also brings a welcome comic relief to the long and tiring sessions for the Alabama delegation. He is never without a tension-breaking piece of nonsense, very often of course at the expense of the lovely Carmen, in her absence and in her presence.

Dr. and Mrs. Habeeb have a share in a condo near Pensacola, visiting it when they can for a few days. But the paramount interests in their lives outside medicine are the careers of their sons.

Dr. Habeeb thinks often of his ''dear mother and dear father,'' of the way his father always comported himself as an English gentleman, and of his mother's finding time to laugh in her life of endless work for her children.

When this writer left Dr. Habeeb at St. Vincent's on a January afternoon, Dr. Habeeb insisted on carrying part of the awkward load of camera cases and recording equipment to the hospital parking deck, which he had never entered before. I had forgotten where I parked, as usual. Dr. Habeeb patiently trudged behind me, up and down the various decks, lugging equipment, still dressed in his scrub suit, making jokes about our utter confusion as to which deck was which.

''I promise not to tell anybody about this if you won't,'' he said, his face beaming in the delicious idiocy of being totally lost within a few hundred yards of his office.

Enthusiastic, Dedicated

Dr. Habeeb's irrepressible clowning and wisecracks off the job may be his way of muting his profound empathy for others, his genuine love of people, and his deeply held religious beliefs. He was almost embarrassed, for example, when a relocation of the chapel at St. Vincent's made his daily moments of meditation and prayer common knowledge. While he makes no secret of his convictions, he has no desire to flaunt them.

In an age when some critics have faulted younger physicians for their alleged robotic detachment, Dr. Habeeb might appear to them a charming anarchronism, a throwback to the days of warm, caring physicians of song and story.

And he is all of that. MASA President Ronald E. Henderson, M.D., says of the man with whom he has worked closely for the past 15 years:

''He is unique. He exudes the same enthusiasm for his work as a resident might who had been doing it only a year. He loves his work, and his dedication to medicine is unsurpassed in anyone I know. He even answers his own phone, which is unusual these days. He will, without hesitation, come to the hospital in the middle of the night when a doctor or patient requests him, although another member of his group is on call.

''He is the most respected physician I know, and that respect comes from his patients and his peers alike. There are important people in this community who would not permit themselves to be put to sleep by anyone else.''

J. Garber Galbraith, M.D., Birmingham neurosurgeon and former MASA President, began his internship with Dr. Habeeb at the old TCI Hospital. Dr. Galbraith recalls:

''The second year, he went into anesthesiology training under Dr. Bryce Robinson, the only M.D. anesthesiologist in the state at that time. When Dr. Robinson went into the service, Dr. Habeeb took over. He started coming into town to give anesthesia for Dr. Frank Wilson and other leading surgeons in town. . . .

''He's a pioneer anesthesiologist in the area and he's done an outstanding job of building a very distinguished group of anesthesiologists. He is a warm, personable individual who has always shown real concern for his patients, visiting them before and after surgery. He also meets with families and has a way of making people feel good.

''He has more physician friends than any doctor I know.

''Now I'll tell you something bad about him. When he was living at TCI Hospital, that room of his was the biggest mess you ever saw — a gopher hole, with journals piled everywhere. They couldn't get him out of it. The only way they ever did force him to move was by giving the hospital away, to Lloyd Noland Foundation.''

After the death of Dr. Robinson in December 1981, Dr. Habeeb, with certificate no. 342, may well be the senior anesthesiologist in point of service in the state. That neither inflates him nor burdens him, as he goes about his serious dedication to his patients, serene in the belief that he has done his best to follow the fading inscription in his old Anatomy book:

''In all thy ways, acknowledge Him, and He will direct thy path.'' ⊡

Leptospirosis

LeRoy F. Harris, M.D.*
Wallace B. Frierson, M.D.†

Leptospirosis is a zoonosis with protean clinical manifestations. Diagnosis requires a high index of suspicion and is confirmed by isolation of the organism from appropriate specimens or by serologic studies. To be effective, antimicrobial therapy must be initiated early in the course of illness and consists of penicillin or tetracycline.

Leptospirosis is an uncommon infection with only 498 human cases in the United States reported to the Center for Disease Control from 1974-1978. The Southeast, however, accounted for two-fifths of all cases and Alabama ranked seventh among states in incidence of this illness.[1] In Huntsville we have documented two cases of leptospirosis in the past three years, but undoubtedly have come in contact with many more.[2]

Case Reports

Case No. 1

A 36-year-old male was admitted to the hospital with a two day history of fever, shaking chills, diaphoresis, costovertebral angle (CVA) pain, and dark urine. The patient was an astronaut candidate in the space program and two weeks prior to admission he suffered an insect bite while in the woods. His son had fever and a macular rash three days before the patient became ill. On physical examination the patient had a temperature of 105° F., pulse 74 beats per minute, and there was minimal CVA tenderness. There was no icterus, muscle tenderness, organomegaly or lymphadenopathy. Laboratory values included a hemoglobin of 15.2 gm/dl, hematocrit 47.5%, and white blood cell count (WBC) 7700/cu mm with 75% segs, 1% bands, 18% lymphs, 5% monos, and 1% eosinophils. The urine was coffee colored and contained protein greater than 300 mg/ml. The liver function tests were minimally elevated and the serum creatinine was 2.2 mg/dl and reached a maximum of 4.6 mg/dl. The chest x-ray showed clear lung fields and blood and urine cultures were sterile. The patient was treated with parenteral doxycycline hyclate, 200 mg/day, and aqueous penicillin G, 12 million units/day, and rapidly defervesced. At a followup examination one week after discharge the patient was asymptomatic and had a normal urinalysis and serum creatinine. Serologic studies showed no change between acute and convalescent titers for Mycoplasma pneumoniae and rickettsia. The Microscopic Agglutination Test for Leptospira interrogans serogroup andaman revealed a rise in titer from undetectable to 1:3200.

Case No. 2

A 52-year-old male was admitted with a seven day history of jaundice and a three day history of leg pain. The patient was the director of a recreational organization and had a pet dog which slept on the patient's bed. On physical exam the patient was afebrile, icteric, and had exquisite leg muscle tenderness. The lungs were clear to auscultation and there was no organomegaly or lymphadenopathy. Laboratory exam revealed a hemoglobin of 14.2 g/dl, hematocrit 41.3%, and WBC 8100/cu mm with 85% segs, 4% bands, 8% lymphs, and 3% monos. The platelet count was 68,000/cu mm and the urinalysis was positive for bile and microscopic hematuria and pyuria. Total bilirubin was 10.3 mg/dl

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(and reached a maximum of 27.5 mg/dl) and the alkaline phosphatase and serum glutamic oxaloacetic transaminase were raised approximately two times normal. The blood urea nitrogen and creatinine were elevated at 113 mg% and 4.1 mg/dl, respectively. Blood and urine cultures were sterile and no myoglobin was detected in the urine. The chest x-ray showed clear lung fields and abdominal ultrasonography revealed no evidence of extrahepatic obstruction. The patient received platelet transfusions when his platelet count dropped below 20,000/cu mm. His condition gradually improved with supportive therapy although at discharge he remained icteric and ambulated with great difficulty because of leg pain. When seen for a followup appointment two weeks after discharge, the patient was not icteric, his leg muscle tenderness had resolved, and all laboratory tests had normalized. Serologic studies showed no change between acute and convalescent titers for respiratory viruses, Mycoplasma pneumoniae and Q-fever. The Microscopic Agglutination Test for Leptospira interrogans serogroups copenhagen and mankarso demonstrated a rise in titer from undetectable to 1:12800.

Discussion

Leptospirosis is a zoonosis caused by the spirochete organism, Leptospira interrogans. Although there are more than 150 antigenically distinct serogroups, 6 are the most common causes of human infection and include autumnalis, canicola, grippotyphosa, hebdomadis, icterohemorrhagiae and pamona. Leptospires are common parasites of wild and domestic animals and have a world-wide distribution. Infected animals may not appear ill and may become chronic excreters of the organism in their urine. Immunization against leptospirosis in domestic animals can prevent illness but not the chronic urinary excretion of leptospires. Rodents are the commonest wild animal transmitting the disease to humans with dogs, cattle, and swine the most important domestic animal vectors. Humans become infected by coming into direct contact with infected animal tissues or with soil or water contaminated by leptospira-laden urine.[3]

Traditionally leptospirosis has been regarded as disease associated with certain occupations such as farming, abattoir and sewer working and veterinary medicine. Recent trends, however, show that less than one-third of cases result from vocational exposure, and the majority of illnesses result from avocational exposure such as camping and fishing and from domestic pet dogs.[4, 5] Leptospirosis occurs most frequently in the summer and early fall and demonstrates a 3:1 male predominance. Nearly 70% of cases occur in individuals less than 40 years of age and the illness is uncommon in persons at either extreme of life (less than 10 years old, greater than 60 years old).[1]

The most common form of leptispirosis is designated anicteric leptospirosis and classically is described as a biphasic illness. Following penetration through mucous membranes or skin, leptospires hematogenously disseminate throughout the body and after an incubation period of approximately 10 days produce manifestations of an acute systemic infection. It is during this first or septicemic stage that leptospires can be isolated from blood and cerebrospinal fluid. The first stage terminates in 4 to 7 days followed by the second or immune stage during which leptospires can be isolated from the urine and antibody to the organism appears. The manifestations of the second stage are thought to be the result of the body's immune response to the infection. In addition to the anicteric form of leptospirosis, the infection may be asymptomatic and manifested only by a positive antibody response or the infection may be severe and characterized by jaundice, renal failure, and hemorrhage which is known as Weil's disease.[3]

The manifestations of the first or septicemic stage of anicteric leptospirosis often are abrupt and dramatic and have been coined a "brutal beginning." Headache is accompanied by severe myalgia, fever, chills, malaise, and even cardiovascular collapse. Gastrointestinal complaints consisting of abdominal pain, nausea, and vomiting may occur. Physical examination discloses an acutely ill appearing patient with fever, photophobia, conjunctival suffusion, and intense muscle tenderness. Jaundice, lymphadenopathy, and hepatosplenomegaly are less common and central nervous system manifestations including nuchal rigidity and altered sersorium are seen. The skin rash of the first stage of anicteric leptospirosis usually is transient and truncal in location and ranges from macular to petechial. A variant of the first stage described at Fort Bragg, North Carolina, in 1942 includes fever, splenomegaly, and a bilateral pretibial skin rash.[6]

The first stage remits spontaneously in 4-7 days to be followed by a 2-3 day period of relative well-being. Next ensues the second or immune stage which is characterized by fever, meningitis, uveitis, and leptospiruria. Fever is usually low grade and of brief duration. Meningitis is clinically apparent in 50% cases and in its severest form appears as headache, vomiting and stiff neck. Cerebrospinal fluid (CSF) abnormalities occur in up to 86% of cases and include pleocytosis which is usually less than 500 cells/cu mm and predominately mononuclear, elevated protein and normal glucose.[6] Anterior uveitis occurs from one to four months after the first stage of leptospirosis and presents as uveitis or iridocyclitis. It may be unilateral or bilateral and may recur.[7] Leptospiruria is asymptomatic and usually lasts from one to three weeks.[3]

In addition to the classic biphasic illness described above, anicteric leptospirosis may present as a uniphasic disease without the manifestations of the second stage. Alternatively the two stages may be separated by a 14 day period of well-being or both stages may occur

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Reference: 1. Sheu YS, Ferguson JA, Cooper JR: *Evaluation of the Abuse Liability of Diethylpropion, Phendimetrazine, and Phentermine,* unclassified document, ADAMHA, HHS. Office of Medical and Professional Affairs, NIDA, 1980, pp 10–15.

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INDICATIONS AND USAGE: Melfiat® 105 (phendimetrazine tartrate) is indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class (See CLINICAL PHARMACOLOGY) should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, symptomatic cardiovascular disease, moderate to severe hypertension, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors (hypertensive crises may result).

WARNINGS: Tolerance to the anorectic effect usually develops within a few weeks. When this occurs, the recommended dose should be discontinued. Phendimetrazine tartrate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly.

Drug Dependence: Phendimetrazine tartrate is related chemically and pharmacologically to the amphetamines. Amphetamines and related stimulant drugs have been extensively abused, and the possibility of abuse of phendimetrazine tartrate should be kept in mind when evaluating the desirability of including a drug as part of a weight-reduction program. Abuse of amphetamines and related drugs may be associated with intense psychological dependence and severe social dysfunction. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high-dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG, manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxication is psychosis, often clinically indistinguishable from schizophrenia.

USAGE IN PREGNANCY: The safety of phendimetrazine tartrate in pregnancy and lactation has not been established. Therefore, phendimetrazine tartrate should not be taken by women who are or may become pregnant.

USAGE IN CHILDREN: Phendimetrazine tartrate is not recommended for use in children under 12 years of age.

PRECAUTION: Caution is to be exercised in prescribing phendimetrazine tartrate for patients with even mild hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of phendimetrazine tartrate and the concomitant dietary regimen. Phendimetrazine tartrate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage.

ADVERSE REACTIONS: Cardiovascular: Palpitation, tachycardia, elevation of blood pressure.
Central Nervous System: Overstimulation, restlessness, dizziness, insomnia, euphoria, dysphoria, tremor, headache; rarely psychotic episodes at recommended doses.
Gastrointestinal: Dryness of the mouth, unpleasant taste, diarrhea, constipation, other gastrointestinal disturbances.
Allergic: Urticaria.
Endocrine: Impotence, changes in libido.

OVERDOSAGE: Manifestations of acute overdosage with phendimetrazine tartrate include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states.
Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma. Management of acute phendimetrazine tartrate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Acidification of the urine increases phendimetrazine tartrate excretion. Intravenous phentolamine (Regitine) has been suggested for possible acute, severe hypertension, if this complicates phendimetrazine tartrate overdosage.

DOSAGE AND ADMINISTRATION: Since Melfiat® 105 (phendimetrazine tartrate) 105 mg is a slow release dosage form, limit to one slow release capsule in the morning. Melfiat® 105 (phendimetrazine tartrate) is not recommended for use in children under 12 years of age.

HOW SUPPLIED: Each orange and clear slow release capsule contains 105 mg phendimetrazine tartrate in bottles of 100. NDC 0063-1082-06.

CAUTION: Federal law prohibits dispensing without prescription.

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consecutively without a latent period.[6]

Weil's disease is the most serious form of leptospirosis. Although originally described as an icteric disorder associated with the serogroup icterohemorrhagiae, it can be caused by any of the serogroups of Leptospira interrogans. Weil's disease is an uncommon variant of leptospirosis, occurring in 5 to 10% of cases, but accounts for all the mortality of leptospirosis cases. It is a syndrome characterized by fever, jaundice, azotemia, hemorrhage, altered sensorium, and cardiovascular collapse. Weil's disease may demonstrate the biphasic pattern often seen in anicteric cases but more commonly is relentlessly progressive with mortality rates of up to 10%.[8]

Definitive diagnosis of leptospirosis is established by culturing the organism or by serologic studies. Leptospires require special media (in Alabama obtained by request from the state laboratory) for isolation. During the first or septicemic stage, organisms are present in blood and CSF and thus are appropriate specimens to be submitted for culture. During the second or immune stage organisms are found in urine which should be cultured. Serologic diagnosis of leptospirosis consists of either a seroconversion or a fourfold or greater rise in antibody titer between acute and convalescent sera in the presence of a compatible clinical illness.[3]

Specific antimocrobial therapy for leptospirosis remains a clouded issue. Although retrospective and experimental studies suggest therapeutic efficacy for penicillin, tetracycline, erythromycin, cephalothin, and streptomycin, three controlled trials reached different conclusions. Two of the trials found no advantage of penicillin, tetracycline or chloramphenicol compared to placebo and the third trial demonstrated diminished duration of fever when penicillin was instituted within the first 4 days of illness as compared to supportive treatment alone. Despite the paucity of convincing data showing therapeutic efficacy of antibiotic treatment, most authorities recommend initiation of penicillin or tetracycline therapy early in the course of leptospirosis. Aqueous penicillin G is given in a dose of 4 million units/day for adults and 6 to 8 million units/m^2 of body surface area/day for children. Tetracycline 2 grams/day in adults or 10-20 mg/kg/day in children is alternative therapy.[8] After 48 hours of illness or after the onset of jaundice, meningitis or renal failure, antimicrobial therapy is thought to be of no avail. ⊡

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The Current Management of Cataracts

Robert S. Moorman, Jr., M.D.*

Definition and Scope of the Problem

A cataract is any opacity of the crystalline lens sufficient to cause visual impairment. Seventeen million people throughout the world are blind from cataracts. In India alone, cataracts cause blindness in six million people. Many of these develop at a younger age than in the United States, often occurring as young as 45. Cataract surgery is the most frequent eye operation performed in this country, with over 500,000 cases done in 1981. Approximately 40 percent of these operations include the insertion of an intraocular lens implant. In the United States, over 500,000 intraocular lenses have been inserted since 1978.

There is a great contrast in the methods of cataract removal in different parts of the world. In the United States, many sophisticated instruments are used in conjunction with the latest microsurgical techniques. However, in an Indian eye relief camp, a surgeon may remove more than 100 cataracts a day, using only basic instruments, no microscope, and hand-held flashlights for illumination.

Symptoms

The earliest symptom occurring with cataract formation is decreased distant visual acuity. This is frequently accompanied by some improvement in the unaided near visual acuity, with the patient often being able to read without glasses. Frequent prescription changes are needed, and there may be increased glare and halos around lights. With a posterior subcapsular cataract, the vision may be much worse in bright light. Some difficulty with color perception may occur, and there may be monocular diplopia.

Examination

Optimal clinical examination is performed through a widely dilated pupil with a slit lamp biomicroscope. A complete medical eye examination is also done, including external examination, refraction with best corrected visual acuity, ocular motility, retinal examination, and intraocular pressure to rule out glaucoma. In cases of opaque media B-scan ultrasonography may be indicated to rule out posterior segment disease. If an intraocular lens implant is intended, corneal keratometric measurements are indicated, plus A-scan ultrasonography to measure the axial length of the eye. Measurement of the corneal diameter is also needed if an anterior chamber implant is to be used.

When to Operate

Children with a unilateral congenital cataract will almost never develop normal vision. However, there is at least a chance of maintaining a cosmetically acceptable eye with good fixation if surgery is done within the first few weeks of life. This requires a firm commitment between the parents and the ophthalmologist to follow the surgery with early contact lens fitting and closely supervised occlusion of the normal eye.

In adults, cataracts are removed when vision is reduced to an unacceptable level. Visual disability de-

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pends on the age, occupation, education, mental alertness, reading habits, and similar factors. In many cases of early cataracts visual acuity remains adequate for years with the proper eye glass prescription. In the elderly patient with no great need for binocular vision, surgery can often be postponed until significant cataract change occurs in the better eye. In general, a cataract is not removed until the visual acuity drops to 20/60 or worse. However, in some cases of posterior

TABLE I
CLASSIFICATION

1. **Congenital**
 - **A. Genetic**
 - **B. Maternal**
 - **1) Rubella, syphilis**
 - **2) Secondary to amniocentesis**
2. **Infantile or juvenile onset**
 - **A. Inborn errors of metabolism such as diabetes, galactosemia, homocyst, inuria, Wilson's Disease, Lowe's Syndrome.**
 - **B. Chromosomal abnormalities — Down's Syndrome, Turner's Syndrome.**
 - **C. Unknown etiology — craniofacial dysostosis, Rothmund's Syndrome, macular dystrophy, idiopathic hypoparathyroidism.**
 - **D. Other ocular syndrome — aniridia, microphthalmia, Rieger's Syndrome, persistent hyperplastic primary vitreous, retinitis pigmentosa.**
3. **Late onset — senescent**
 - **A. Without associated familial disease.**
 - **B. With contributing disease such as diabetes mellitus, ocular surgery, familial incidence, Paget's disease of bone.**
4. **Secondary**
 - **A. Systemic — tetany, starvation**
 - **B. Related to ocular disease — inflammation, neoplasm, physical trauma — perforating injury, blunt trauma, radiation, electrical.**
 - **C. Secondary to local or systemic chemicals — steroids, chlorpromazine, dinitrophenol, intraocular iron (siderosis), copper (chalcosis).**

subcapsular opacities, the visual acuity may be 20/40 or better in the dimly illuminated examining room, yet reading may be impaired and visual acuity in bright light may be as poor as 20/200. It is not necessary to wait until a cataract is mature or "ripe." In fact, surgery is somewhat safer if it is done before the cataract has reached maturity. Removal by surgery is the only treatment for cataracts to date. However, recent evidence suggests that aspirin may inhibit or slow the progression of cataracts.[1]

Surgical Techniques

Couching of a cataract (pushing the lens backwards into the vitreous) was done at least 2,000 years ago.[2] Many of these eyes were destroyed by infection and inflammation. In 1748, Daviel devised a type of extracapsular cataract extraction. A variant of this technique was used almost exclusively until the early 1940s.

Until recently, an intracapsular technique has been the procedure of choice for almost the last forty years. The development of microsurgical techniques, alphachymotrypsin to help dissolve the lens zonules, finer suture material, and the use of a cryoextractor (figure 1) have all helped to refine the procedure.

In the late 1960s, Dr. Charles Kelman popularized the phacoemulsification technique, whereby the cataract is removed through a 3 mm. incision, utilizing

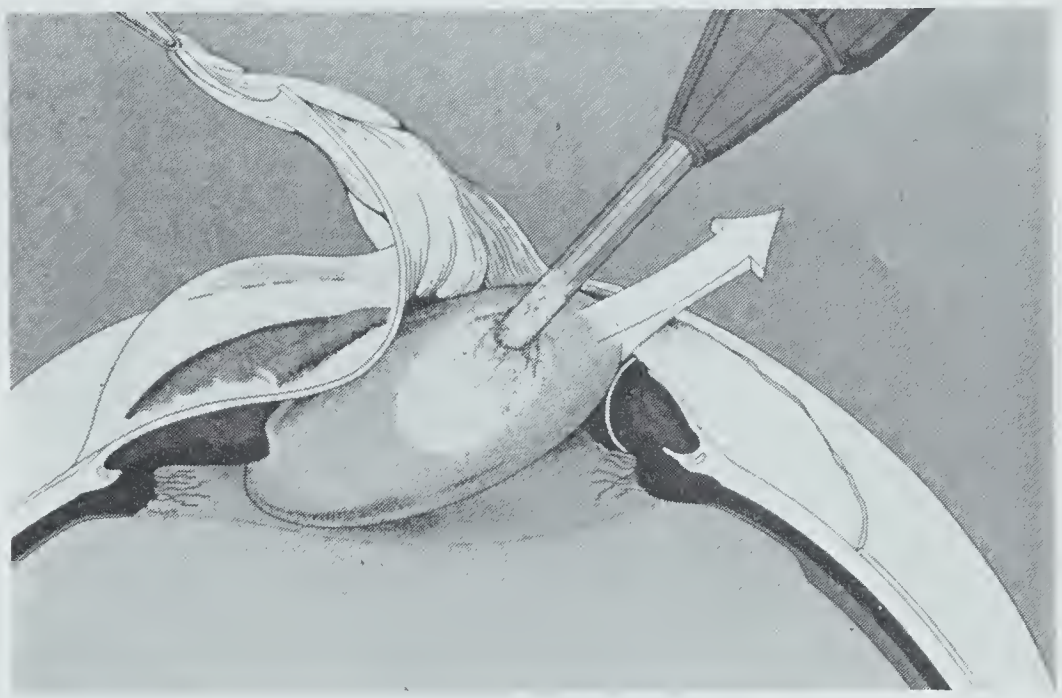


Figure 1. Cryoextraction of cataract

ultrasonic fragmentation of the nucleus and aspiration of the lens cortex. Many surgeons are returning to an extracapsular technique, especially when combined with intraocular lens implantation. This requires adequate training in microsurgical techniques. There must be careful control of all steps in the operation — incision, anterior capsule, lens nucleus, cortex, and posterior capsule, combined with tight wound closure.

Technology and Cost Containment

Containing the cost of cataract surgery presents a tremendous challenge. The new technology with expensive instrumentation has a great impact on the cost of medical care. These instruments include but are not limited to the following:

1. A high quality operating microscope such as the Zeiss Opmi 6.
2. Cryoextractor for intracapsular surgery.
3. Wet-field bipolar cautery.
4. A vitreous cutting instrument such as the Ocutome.
5. A Kelman phacoemulsifier or a similar unit for extracapsular surgery.
6. A unit to perform A and B-scan ultrasonography.

The development of sodium hyaluronate has also been of help in protecting the corneal endothelium, especially with intraocular lens implantation.

In an effort to help reduce costs, many surgeons are performing most of their cataract surgery and other ophthalmic procedures on an outpatient basis, thus rendering significant savings, and making the hospital beds available for other use. Several large series of cataract operations, done on an outpatient basis, show no significant difference in complications or in the final visual result.[3, 4]

Visual Correction Following Surgery

Aphakia remains the major problem in cataract surgery.[5] Glasses have many optical disadvantages, especially in correcting monocular aphakia (figures 2 & 3). There is a 30% increase in image size resulting in diplopia unless the fellow eye is occluded in some way. There is also limitation of the peripheral visual field, and some distortion of peripheral vision. These symptoms are partially eliminated with the use of the 4-drop lens designed by Welch.

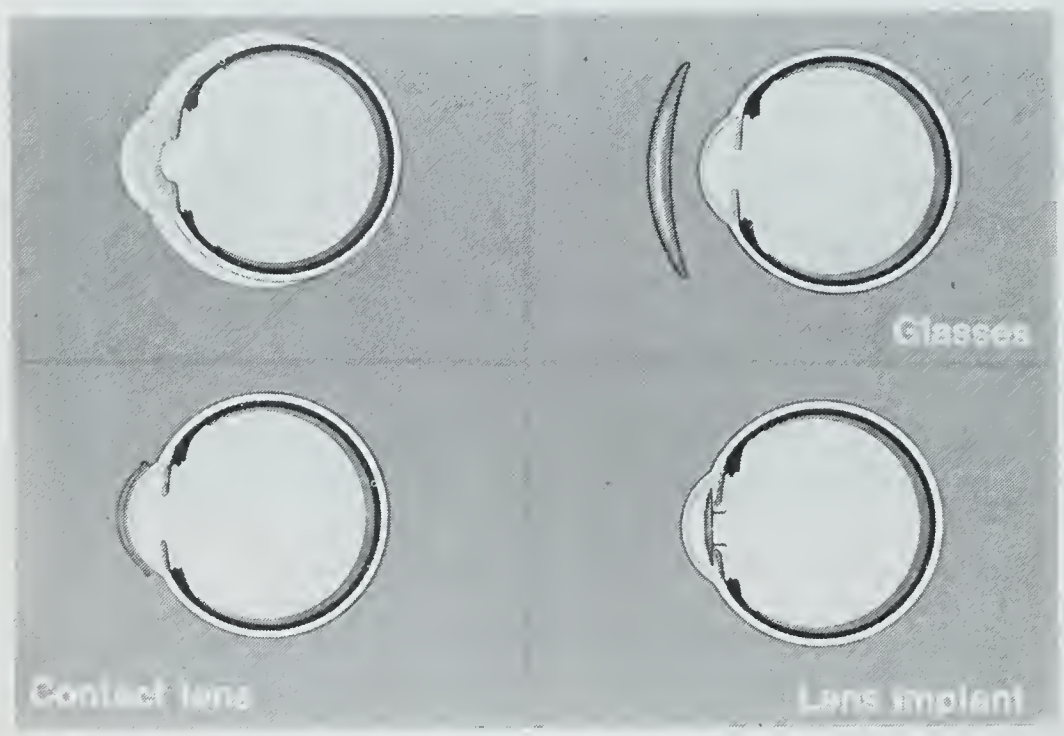


Figure 2. Optical correction of aphakia

The use of a contact lens in monocular aphakia gives only an 8% increase in image size, thus rarely causing diplopia. There is a full peripheral field of vision without distortion. Hard or gas-permeable contact lenses give excellent optical correction, but there may be adaptation problems because of discomfort, and handling problems can be a tremendous obstacle. Many elderly patients, especially those with arthritis, are simply unable to insert and remove the lenses and must rely on a relative.

Soft contact lenses are more comfortable, but can be even more difficult to handle. In addition, they do not correct astigmatism. They also will absorb chemicals or other particles in the air and thus are easily contaminated.

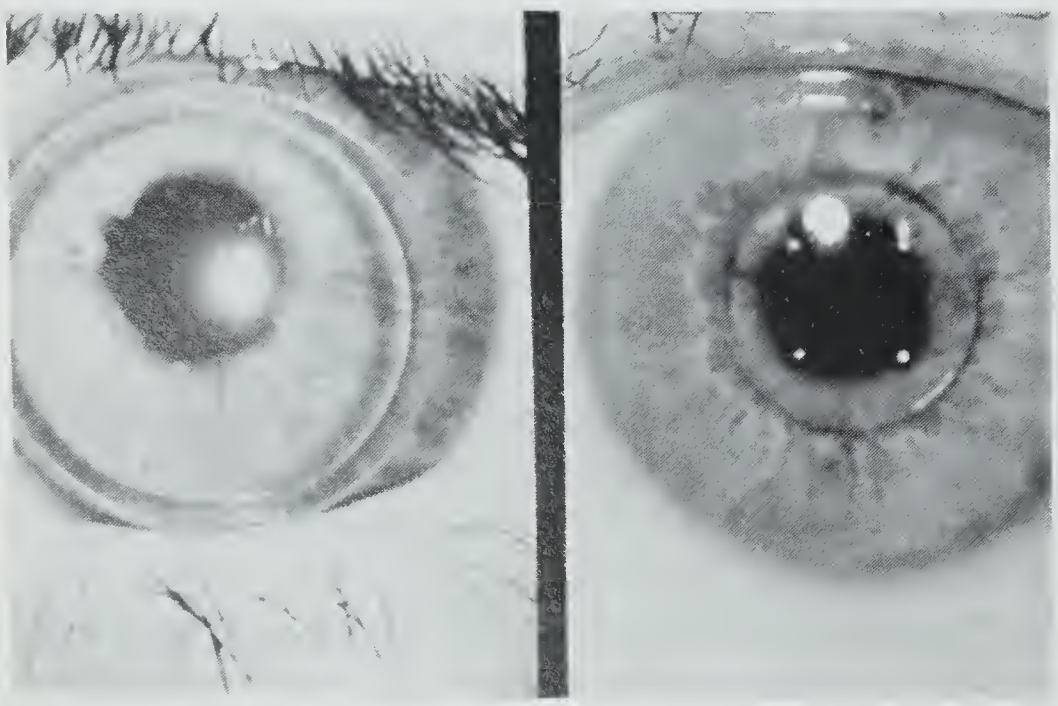


Figure 3. Optical correction of aphakia: a. contact lens; b. lens implant.

BRIEF SUMMARY
PROCARDIA® CAPSULES For Oral Use
(nifedipine)

INDICATIONS AND USAGE: I. Vasospastic Angina: PROCARDIA (nifedipine) is indicated for the management of vasospastic angina confirmed by any of the following criteria: 1) classical pattern of angina at rest accompanied by ST segment elevation, 2) angina or coronary artery spasm provoked by ergonovine, or 3) angiographically demonstrated coronary artery spasm. In those patients who have had angiography, the presence of significant fixed obstructive disease is not incompatible with the diagnosis of vasospastic angina, provided that the above criteria are satisfied. PROCARDIA may also be used where the clinical presentation suggests a possible vasospastic component but where vasospasm has not been confirmed, e.g., where pain has a variable threshold on exertion or in unstable angina where electrocardiographic findings are compatible with intermittent vasospasm, or when angina is refractory to nitrates and/or adequate doses of beta blockers.

II. Chronic Stable Angina (Classical Effort-Associated Angina): PROCARDIA is indicated for the management of chronic stable angina (effort-associated angina) without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or organic nitrates or who cannot tolerate those agents.

In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in those patients are incomplete.

Controlled studies in small numbers of patients suggest concomitant use of PROCARDIA and beta blocking agents may be beneficial in patients with chronic stable angina, but available information is not sufficient to predict with confidence the effects of concurrent treatment, especially in patients with compromised left ventricular function or cardiac conduction abnormalities. When introducing such concomitant therapy, care must be taken to monitor blood pressure closely since severe hypotension can occur from the combined effects of the drugs. (See Warnings.)

CONTRAINDICATIONS: Known hypersensitivity reaction to PROCARDIA.

WARNINGS: Excessive Hypotension: Although in most patients, the hypotensive effect of PROCARDIA is modest and well tolerated, occasional patients have had excessive and poorly tolerated hypotension. These responses have usually occurred during initial titration or at the time of subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta blockers.

Severe hypotension and/or increased fluid volume requirements have been reported in patients receiving PROCARDIA together with a beta blocking agent who underwent coronary artery bypass surgery using high dose fentanyl anesthesia. The interaction with high dose fentanyl appears to be due to the combination of PROCARDIA and a beta blocker, but the possibility that it may occur with PROCARDIA alone, with low doses of fentanyl, in other surgical procedures, or with other narcotic analgesics cannot be ruled out.

Increased Angina: Occasional patients have developed well documented increased frequency, duration or severity of angina on starting PROCARDIA or at the time of dosage increases. The mechanism of this response is not established but could result from decreased coronary perfusion associated with decreased diastolic pressure with increased heart rate, or from increased demand resulting from increased heart rate alone.

Beta Blocker Withdrawal: Patients recently withdrawn from beta blockers may develop a withdrawal syndrome with increased angina, probably related to increased sensitivity to catecholamines. Initiation of PROCARDIA treatment will not prevent this occurrence and might be expected to exacerbate it by provoking reflex catecholamine release. There have been occasional reports of increased angina in a setting of beta blocker withdrawal and PROCARDIA initiation. It is important to taper beta blockers if possible, rather than stopping them abruptly before beginning PROCARDIA.

Congestive Heart Failure: Rarely, patients, usually receiving a beta blocker, have developed heart failure after beginning PROCARDIA. Patients with tight aortic stenosis may be at greater risk for such an event.

PRECAUTIONS: General: Hypotension: Because PROCARDIA decreases peripheral vascular resistance, careful monitoring of blood pressure during the initial administration and titration of PROCARDIA is suggested. Close observation is especially recommended for patients already taking medications that are known to lower blood pressure. (See Warnings.)

Peripheral edema: Mild to moderate peripheral edema, typically associated with arterial vasodilation and not due to left ventricular dysfunction, occurs in about one in ten patients treated with PROCARDIA. This edema occurs primarily in the lower extremities and usually responds to diuretic therapy. With patients whose angina is complicated by congestive heart failure, care should be taken to differentiate this peripheral edema from the effects of increasing left ventricular dysfunction.

Drug interactions: Beta-adrenergic blocking agents: (See Indications and Warnings.) Experience in over 1400 patients in a non-comparative clinical trial has shown that concomitant administration of PROCARDIA and beta-blocking agents is usually well tolerated, but there have been occasional literature reports suggesting that the combination may increase the likelihood of congestive heart failure, severe hypotension or exacerbation of angina.

Long-acting nitrates: PROCARDIA may be safely co-administered with nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.

Digitalis: Administration of PROCARDIA with digoxin increased digoxin levels in nine of twelve normal volunteers. The average increase was 45%. Another investigator found no increase in digoxin levels in thirteen patients with coronary artery disease. In an uncontrolled study of over two hundred patients with congestive heart failure during which digoxin blood levels were not measured, digitalis toxicity was not observed. Since there have been isolated reports of patients with elevated digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing PROCARDIA to avoid possible over- or under-digitalization.

Carcinogenesis, mutagenesis, impairment of fertility: When given to rats prior to mating, nifedipine caused reduced fertility at a dose approximately 30 times the maximum recommended human dose.

Pregnancy: Category C. Please see full prescribing information with reference to teratogenicity in rats, embryotoxicity in rats, mice and rabbits, and abnormalities in monkeys.

ADVERSE REACTIONS: The most common adverse events include dizziness or light-headedness, peripheral edema, nausea, weakness, headache and flushing each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%. Syncopal episodes did not recur with reduction in the dose of PROCARDIA or concomitant antianginal medication. Additionally, the following have been reported: muscle cramps, nervousness, dyspnea, nasal and chest congestion, diarrhea, constipation, inflammation, joint stiffness, shakiness, sleep disturbances, blurred vision, difficulties in balance, dermatitis, pruritus, urticaria, fever, sweating, chills, and sexual difficulties. Very rarely, introduction of PROCARDIA therapy was associated with an increase in anginal pain, possibly due to associated hypotension.

In addition, more serious adverse events were observed, not readily distinguishable from the natural history of the disease in these patients. It remains possible, however, that some or many of these events were drug related. Myocardial infarction occurred in about 4% of patients and congestive heart failure or pulmonary edema in about 2%. Ventricular arrhythmias or conduction disturbances each occurred in fewer than 0.5% of patients.

Laboratory Tests: Rare, mild to moderate, transient elevations of enzymes such as alkaline phosphatase, CPK, LDH, SGOT, and SGPT have been noted, and a single incident of significantly elevated transaminases and alkaline phosphatase was seen in a patient with a history of gall bladder disease after about eleven months of nifedipine therapy. The relationship to PROCARDIA therapy is uncertain. These laboratory abnormalities have rarely been associated with clinical symptoms. Cholestasis, possibly due to PROCARDIA therapy, has been reported twice in the extensive world literature.

HOW SUPPLIED: Each orange, soft gelatin PROCARDIA CAPSULE contains 10 mg of nifedipine. PROCARDIA CAPSULES are supplied in bottles of 100 (NDC 0069-2600-66), 300 (NDC 0069-2600-72), and unit dose (10x10) (NDC 0069-2600-41). The capsules should be protected from light and moisture and stored at controlled room temperature 59° to 77°F (15° to 25°C) in the manufacturer's original container.

More detailed professional information available on request.

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PFIZER INC.

"I can do things that I couldn't do for 3 yrs. including joining the human race again."



Quotes from an unsolicited letter received by Pfizer from an angina patient. While this patient's experience is representative of many unsolicited comments received, not all patients will respond to Procardia nor will they all respond to the same degree.

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"My daily routine consisted of sitting in my chair trying to stay alive."

"My doctor switched me to PROCARDIA[*] *as soon as it became available. The change in my condition is remarkable."*

"I shop, cook and can plant flowers again."

"I have been able to do volunteer work...and feel needed and useful once again."

PROCARDIA can mean the return to a more normal life for your patients—having fewer anginal attacks, taking fewer nitroglycerin tablets, doing more, and being more productive once again.

Side effects are usually mild (most frequently reported are dizziness or lightheadedness, peripheral edema, nausea, weakness, headache and flushing, each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%).



for the varied faces of angina

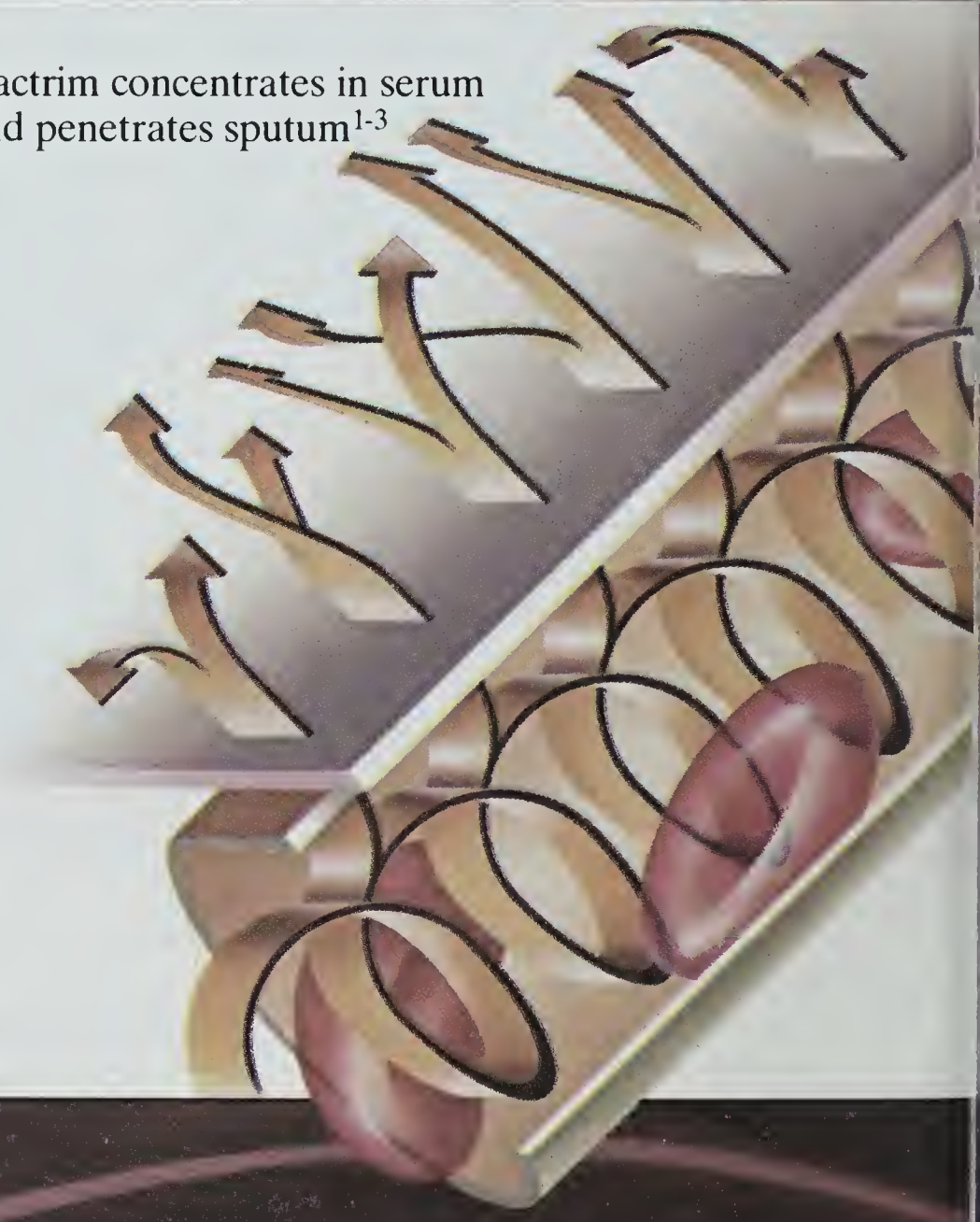
PROCARDIA®
(NIFEDIPINE) *Capsules 10 mg*

*Procardia is indicated for the management of:
1) Confirmed vasospastic angina.
2) Angina where the clinical presentation suggests a possible vasospastic component.
3) Chronic stable angina without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or nitrates or who cannot tolerate these agents. In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks' duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.

Please see PROCARDIA *brief summary on adjoining page.*

Bactrim™ attacks the
(trimethoprim and sulfamethoxazole/Roche)
in acute exacerbations

Bactrim concentrates in serum and penetrates sputum[1-3]



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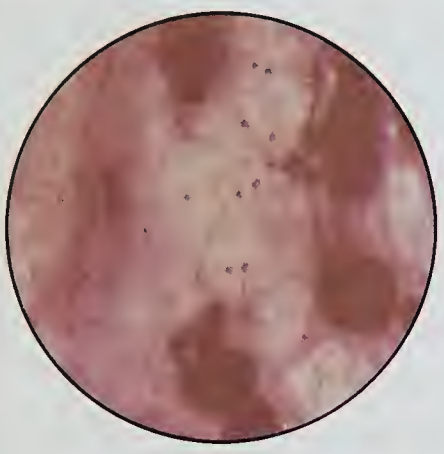
major pathogens of chronic bronchitis*

Bactrim clears sputum of susceptible bacteria

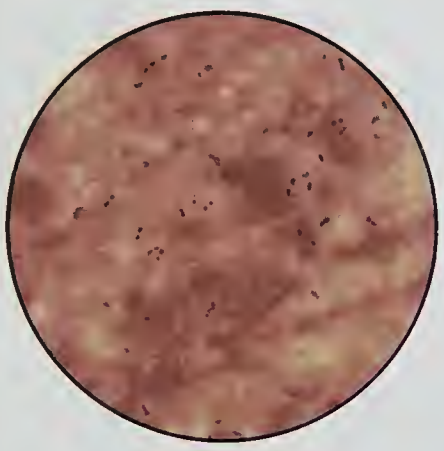
In sputum cultures from patients with acute exacerbations of chronic bronchitis, *H. influenzae* and *S. pneumoniae* are isolated more often than any other pathogens.[4,5] One study of transtracheal aspirates from 76 patients with acute exacerbations found that 80% of the isolates were of these two pathogens.[5]

Bactrim is effective *in vitro* against most strains of both *S. pneumoniae* and *H. influenzae*—even ampicillin-resistant strains. And in acute exacerbations of chronic bronchitis involving these two pathogens, sputum cultures taken seven days after a two-week course of therapy showed that Bactrim eradicated these bacteria in 91% (50 of 55) of the patients treated.[6]

attacks *H. influenzae*—even ampicillin-resistant strains



attacks *S. pneumoniae*



Bactrim reduces coughing and sputum production

In three double-blind comparisons with ampicillin *q.i.d.*, Bactrim DS proved equally effective on all clinical parameters.[7-9] Bactrim reduced the frequency and severity of coughing, reduced the amount of sputum produced and cleared the sputum of purulence.

Bactrim has the added advantages of *b.i.d.* dosage convenience and a lower incidence of diarrhea than with ampicillin, and it is useful in patients allergic to penicillins.

Bactrim also proved more effective than tetracyclines in 10 clinical trials involving nearly 700 patients.[10] Overall clinical condition of the patients, changes in sputum purulence, reduction in sputum volume and microbiological clearance of pathogens—all improved more with Bactrim therapy than with tetracyclines. G.I. side effects occurred in only 7% of patients treated with Bactrim compared with 12% of tetracycline-treated patients. (See Adverse Reactions in summary of product information on next page.)

Bactrim is contraindicated in pregnancy at term and nursing mothers, infants under two months of age, documented megaloblastic anemia due to folate deficiency and hypersensitivity.

Bactrim DS. For acute exacerbations of chronic bronchitis in adults* when it offers an advantage over single-agent antibacterials.

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Economical b.i.d.

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole/Roche)

*Due to susceptible organisms. **Please see next page for summary of product information.**

Bactrim™

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS:

Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100; Prescription Paks of 20 and 28. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension,* containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension,* containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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Extended wear soft lenses are very comfortable and require almost no handling by the patient. They offer a relatively safe alternative to an intraocular lens in that they can be easily removed or replaced. They require very close medical supervision on fitting, and also do not correct astigmatism. Deposits on the lenses are a problem, requiring frequent cleaning by the ophthalmologist, or replacement.

The newer silicone contact lenses offer great promise. They correct astigmatism and can be worn for extended periods of time with less deposit formation, and may last longer than soft lenses.

Intraocular Lenses

Lens implants were originally done by Ridley in 1949 after observing fighter pilots with little reaction from retained intraocular glass foreign bodies. The initial visual results were good, but most of these patients later developed bullous keratopathy or other problems, resulting in visual loss or the need for a corneal transplant.

Lens implants give minimal aniseikonia (less than 4% difference in image size), excellent peripheral vision, and an apparent increased depth of vision. However, complications such as uveitis, glaucoma, hyphema, corneal decompensation, and cystoid macular edema can occur. Excellent visual results have been reported with implants, with only slight increased morbidity compared to cataract surgery without an implant.[6]

Implant Types

1. Anterior chamber — uveitis, glaucoma, and hyphema occurred with some of these early lenses which had poorly finished edges.
2. Iris fixation or pupillary plane — some of these lenses with metal loops caused lacerations of the iris. Other potential complications include iritis, retrolenticular membranes and cystoid macular edema.
3. Posterior chamber — Most of these lenses require an extracapsular surgical technique. Complications include decentration of the lens and secondary opacification of the posterior capsule, often requiring subsequent surgery.

Research is being done on many different types of implants, with a new implant being reported almost monthly. However, very extensive records are required prior to F.D.A. approval of any implant, and surgeons must document their competence prior to approval for intraocular lens implantation. Good results occur in most cases, but precise design, manufacture, sterilization, and surgical techniques are necessary to avoid long term complications.

Contraindications and Postoperative Management

Contraindications to a lens implant include corneal dystrophy, recurrent uveitis, poorly controlled glaucoma, proliferative diabetic retinopathy, or a monocular patient.

Postoperatively, there is little restriction of the patient's usual activity. Patients are cautioned to avoid unusual straining or squeezing, and are advised to do no heavy lifting for six weeks.

Contact lenses are generally fit around six weeks postoperatively, sometimes earlier if phacoemulsification is done. The final glass prescription is usually given 2 to 3 months postoperatively.

Conclusions

The results of cataract surgery are generally very good with a low rate of morbidity. However, there is an approximately 1 in 5,000 chance of infection with visual loss, and there is an approximately five percent chance of some operative or early postoperative complication that may affect the comfort or acuity of the eye at some future time. After surgery, there is an increased incidence of macular problems, retinal detachment, glaucoma, and corneal decompensation.

In summary, few operations give as much patient satisfaction as cataract surgery (with or without a lens implant), as long as the patient is properly informed of the postoperative optical requirements. ⊡

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It makes sense now.

Significant HLA and Erythrocyte Phenotypes Among Physicians, Nurses and Medical Technologists

("Genes of a Feather Flock Together")

by
Albert E. Casey, M.D.
with
Lin, J.; Perdue, S.; Blackburn, K.;
Cummings, B.; Dietrich, U.; Huang, S.; and
McGowan, E.*

The H2 locus in the mouse, about which George Snell [1] and Peter Gorer[2] lectured at Bar Harbor over 30 years ago, has its counterpart in the HLA groups in man. Dausset[3] suggests that the HLA groups may be the means by which one cell in the body recognizes another. For several years we have been investigating the possibility that both the HLA and the Erythrocyte antigens contribute to the process by which the whole organism is recognized and fitted into human society. To this end, we have been cumulating combined HLA and Erythrocyte antigen profiles among volunteers with varying aptitudes, occupations and accomplishments.

Materials and Methods

The first group with sufficient sample for biometrical analysis consists of 38 persons holding doctorates (M.D., Ph.D.), 21 holding the RN degree, 15 medical technologists holding BS or MS degrees, 6 being chief technologists in University, Red Cross, hospital, or independent laboratories in Jefferson County, Alabama (Table I). The remaining 35 volunteers were of various other occupations.

The controls consisted of HLA-A and HLA-B determinations on 476 apheresis donors and Red Cell Antigens (ABO, Lewis, Rhesus, Kell, Duffy, MNS's, Kidd and P1) on 804 frozen blood donors. Determinations on volunteers and controls were performed by the same personnel in the Blood Services Division of the American Red Cross, Alabama Region, situated in Birmingham, AL. Because many of the HLA-A and HLA-B groups have not been determined on Blacks, the volunteers and the controls were 98% Caucasian, with a few Orientals. Some 2520 other controls for the Red Cell Antigens were provided by published data from our laboratory.[4] Additional control standards were available from published frequencies for HLA-A and HLA-B among North American Caucasians.[5]

Results

The results are presented in Table I. HLA-B40-x was significantly associated with physicians, most of whom were engaged in research or teaching ($X^2$9.0, n-1, P.005); HLA-Bw35-y was significantly associated

* From the Blood Services of the American Red Cross, Alabama Region; The Memorial Institute of Pathology; The Departments of Pathology Medical Laboratory Associates and the Medical Center University of Alabama in Birmingham.

TABLE I
HLA-B PHENOTYPES AMONG PHYSICIANS, NURSES AND MEDICAL TECHNOLOGISTS

		MD	*RN*	*BS MT*	*PhD*	*Others*	*Apheresis Donors*	*Total*
HLA-B40	act	9[x]	2	1[u]	3[u]	8	54	77
	exp	3.55	2.76	1.97	1.45	4.61	62.65	
HLA-Bw35	act	9[y]	5	2	2	4	67	89
	exp	4.11	3.19	2.28	1.67	5.32	72.42	
HLA-B5	act	2	7[z]	0	2	3	32	46
	exp	2.12	1.65	1.18	0.86	3.75	37.43	
HLA-B15	act	3	2	10[w]	1	9	62	87
	exp	4.01	3.12	2.23	1.64	5.20	70.79	
Others	act	31	26	17	14	46	737	871
	exp	40.20	31.27	22.33	16.38	52.11	708.21	
Total		54	42	30	22	70	952	1170

with physicians, most entirely engaged in practice ($X^2$6.48, n-1, p.01); HLA-B5-x was significantly associated with registered nurses ($X^2$18.1, n-1, $P10^{-4}$); HLA-B15-w was significantly associated with medical technologists holding a BS or MS degree ($X^2$29.2, n-1, $P10^{-7}$).

Of the 3 Ph.Ds and the 1 Medical Technologist with HLA-B40-u: one Ph.D. is the mother of a physician; one with a Ph.D. had, also, an M.D. degree; the other Ph.D. is professor and head of Biomedical Engineering, and whose research is on cardiovascular function. The Chief Medical Technologist with HLA-B40 is the son and grandson of research oriented physicians.

Over 95 percent of the study group and of the apheresis donors were Caucasoid, as HLA phenotypes have been incompletely studied among Blacks. It was, therefore, feasible to use Terasaki's published standard values for North American Caucasoids,[5] which were applied to the study group: HLA-B40 (0.0660), act 9/54 for MDs, exp 3.56, $X^2$9.0, P.005, significant; HLA-Bw35 (0.0803), act 9/54 for MDs, exp 4.33, n-1, $X^2$6.00, P.012, significant; HLA-B5 (0.0617) phenotypes among nurses, act 7/42, exp 2.59, n-1, $X^2$8.00, P0.0075, significant; HLA-B15 (0.0569) among medical technologists with a BS or MS degree — 10/30 phenotypes, exp. 1.74, n-1, $X^2$42.6; $P10^{-9}$, significant. Both Terasaki's controls and the apheresis donors from the American Red Cross Blood Bank in Birmingham gave identical significance for HLA-B phenotypes among physicians, nurses, and medical technologists in Birmingham.

Three physicians had both HLA-B40 and Bw35 phenotypes. (2/476 Apheresis donors, 3/29 MDs, exp. 0.12, P .001-) Seven of the 9 physicians with HLA-B40 belonged to 5 different families, containing 1-18 physicians among their nearest relatives, and originated in Mississippi, Alabama, South Dakota, Peking, China, and Taiwan, respectively.

Among holders of doctorates (an M.D. or Ph.D. degree) there was a significant association of HLA-A11 phenotype (9/76, exp 3.91, n=1, X^2 7.0 p .01-), as compared with 7/142 HLA-A11 phenotypes without the M.D. degree in the study, and 49/952 among apheresis controls.

In addition, among holders of doctorates (an M.D. or Ph.D. degree) there was a significant association of MNSs group *MM* (18/34, exp 8.84, $X^2$12.82, P .001), as compared with 818 *MM* among 3180 controls.

Discussion

Some features of our results are reminiscent of the work of Sir Francis Galton (6), who found, in 1869, that eminence in a given field of endeavor tended to beget eminence. Eminence in one occupation, such as judges or scientists, tended to be associated significantly with fathers, brothers, sons, uncles or nephews eminent in the same field. Critics of Dr. Galton said he did not differentiate heredity from environment. Dr. Galton was not blessed with erythrocyte and HLA genes that do show that heredity and environment are both very much involved. It would seem that genes of a feather flock together. Yet the genes which flocked together in this study were clustered in the sciences, and distributed throughout the world.

The genetic profile (HLA-Erythrocyte phenotypes), with a half billion possible combinations, gives hope that enough significant data will be provided for considerations in counseling, and that much of a child's potential may be recognized and nurtured at an early age. ⊡

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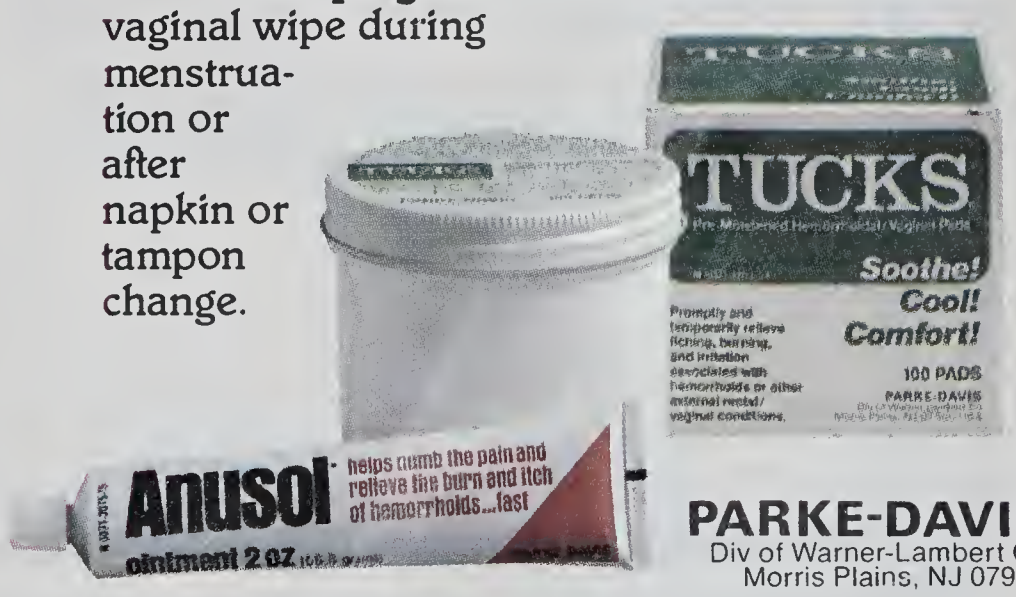
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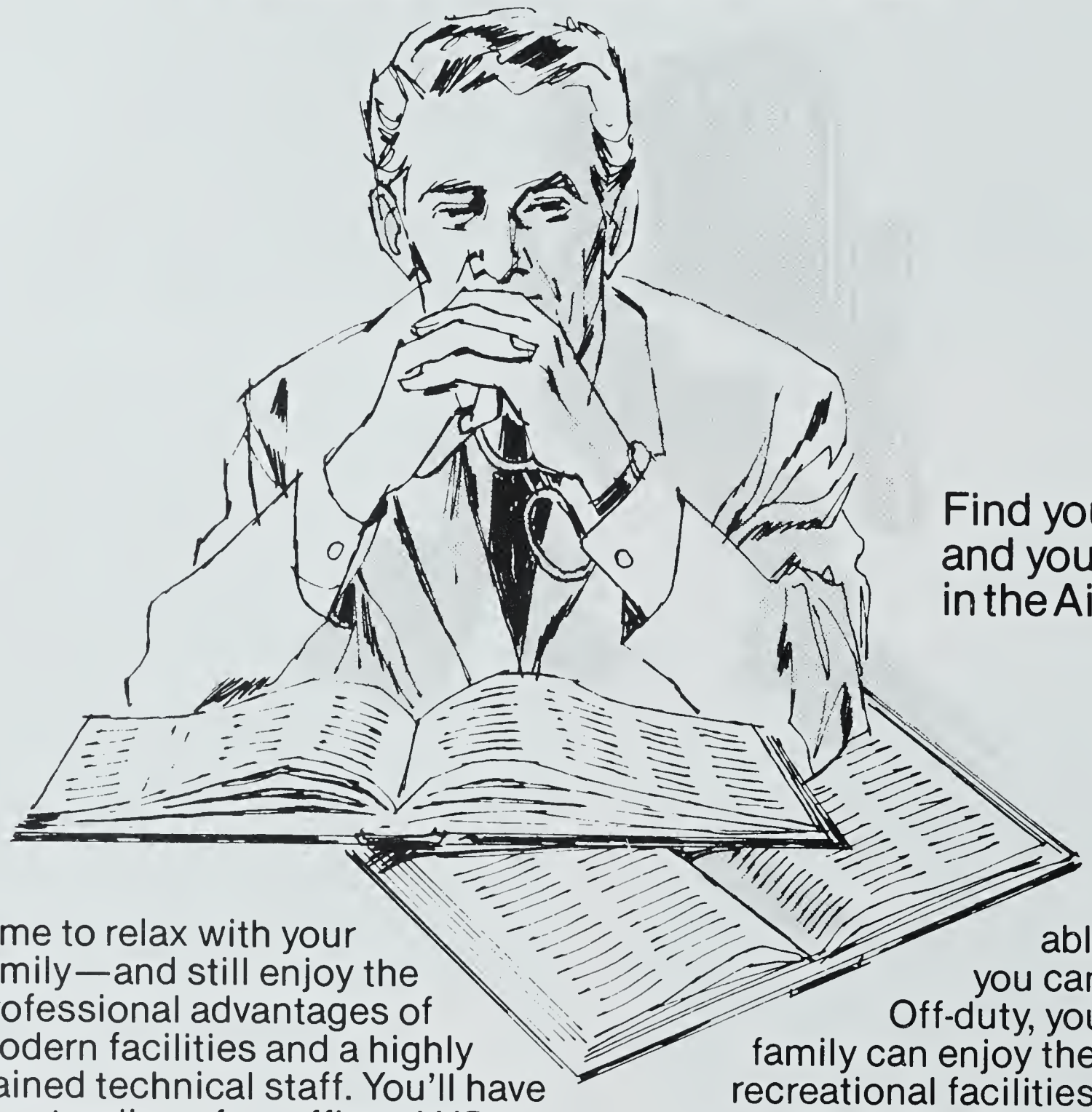


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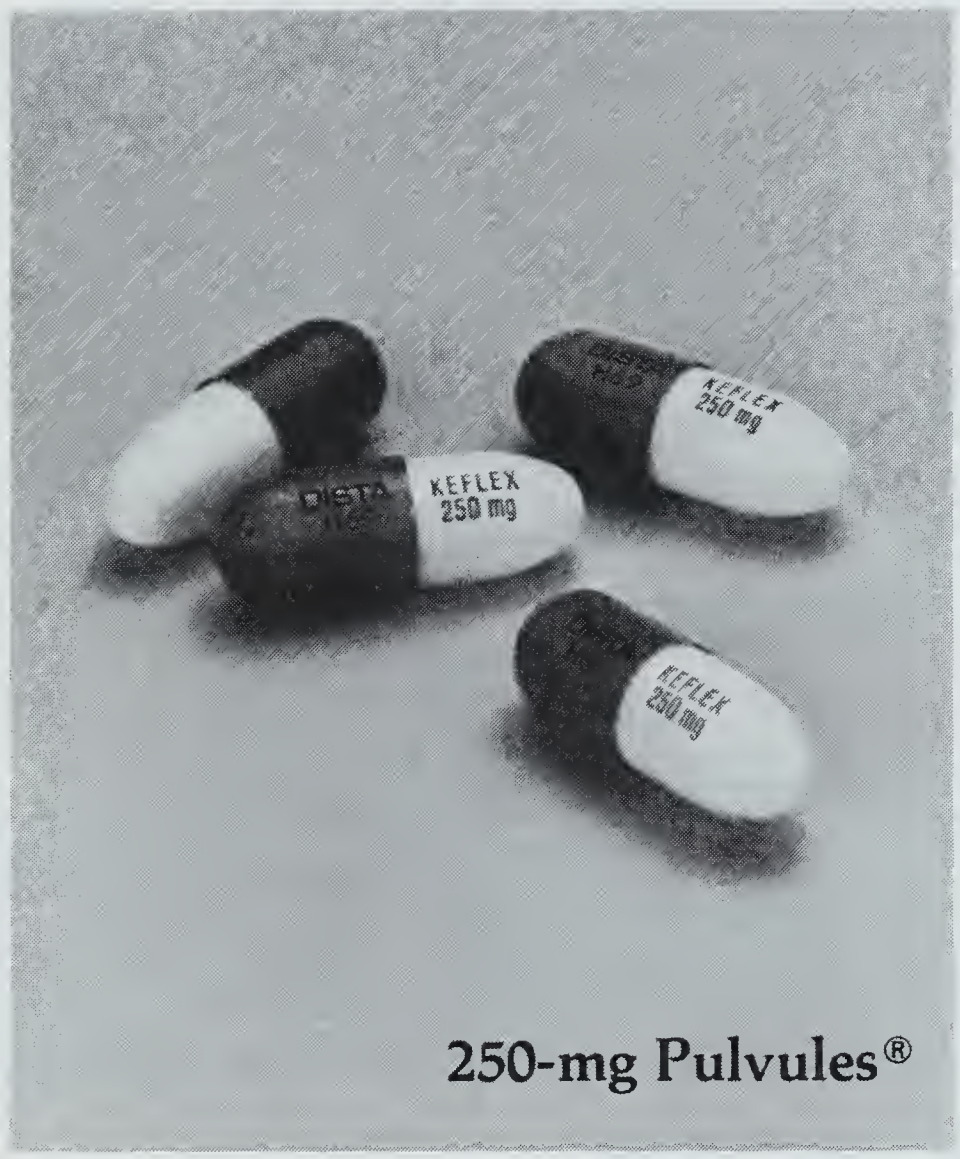
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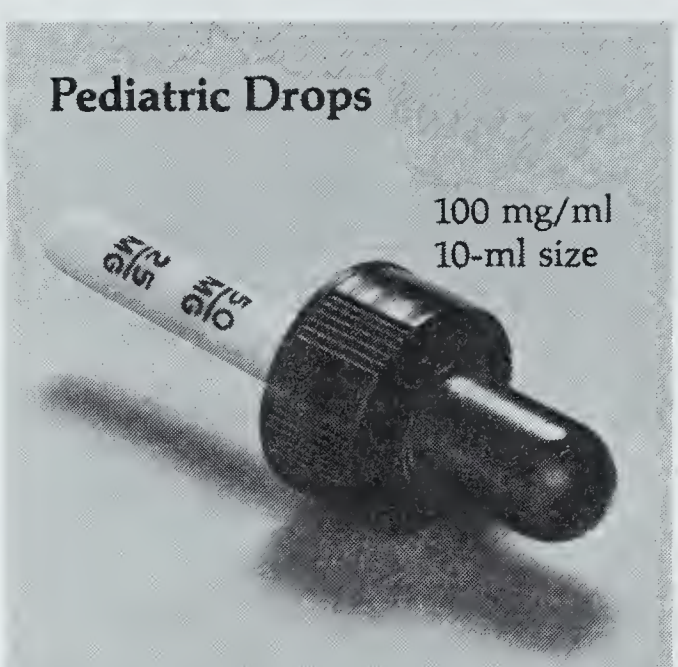
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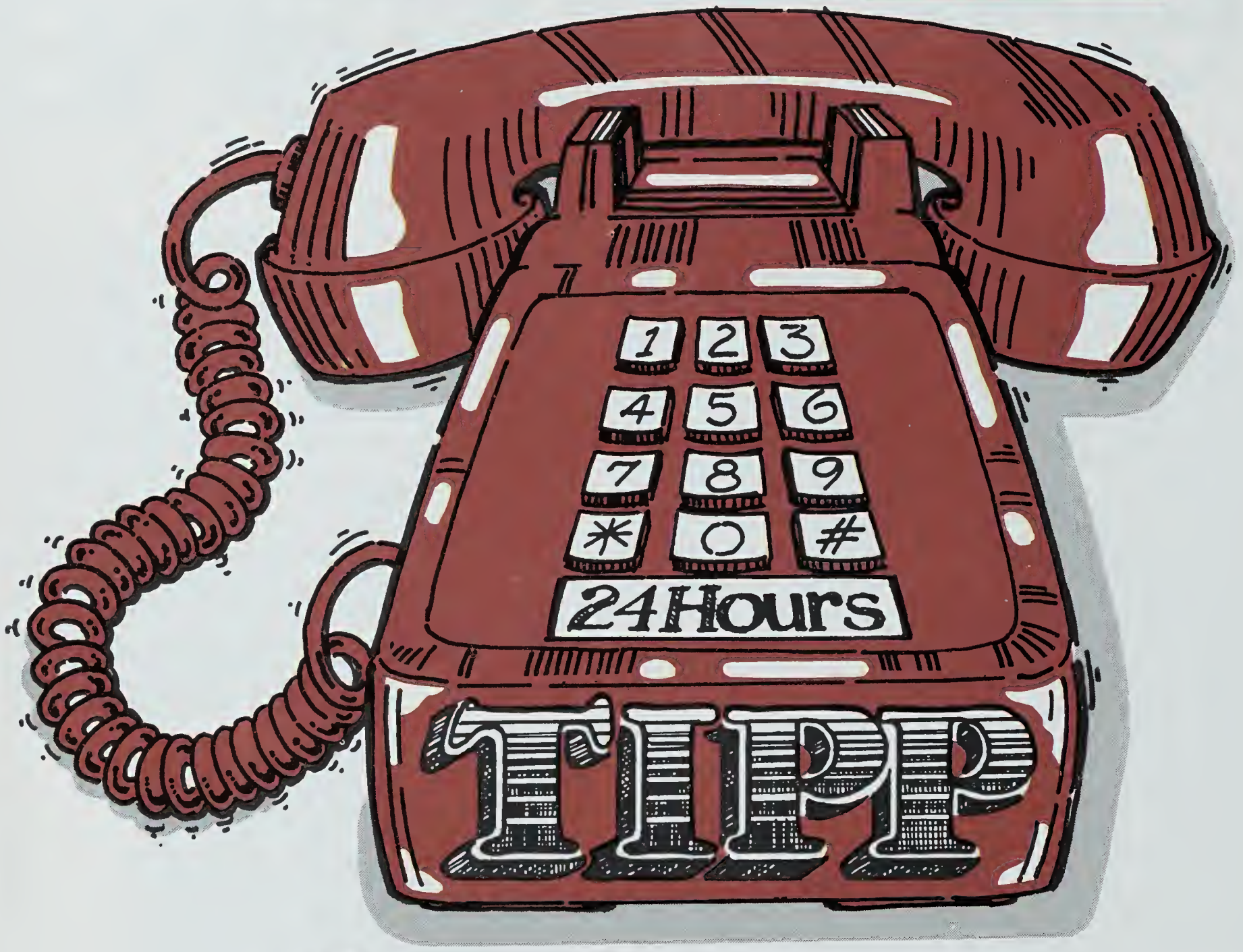
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continued from page 4

ambiguous than are their cinematic counterparts. On our side of the fence, we have to concede the truth that delivering medical care these days has inescapable business aspects, that quite a few doctors have been involved in the formation of collective medical care delivery enterprises, and that a few of us seem to possess an overweening money ethic. Still, we know who we are and that we still wear the white hats.''

He goes on to note that on the corporate side the issues are muddier. Should bigness, per se, be condemned? Should corporate structure by itself? Should the profit motive, which has not always been suspect in the United States? Should penetration into exclusive professional territory? Are these always bad, he asks, or only sometimes?

Profound changes are occurring with great rapidity, Dr. Felch notes, ''the trappings of big business are increasingly apparent, in patient care settings as well as in peripheral medical enterprises.'' Equally evident is the new breed of medical managers, highly skilled, with the determination and the guile to compete in a huge and growing marketplace that accounts for 10% of the Gross National Product. Dr. Felch's counsel is caution and prudence:

''Certainly if flagrantly venal entrepreneurs appear on the scene, we must bend all our efforts to expel them. But for the most part we will be dealing with — working in cooperative ventures with — ethical and decent businessmen; our tasks will be to remind them always of the importance of the patient care mission vis-a-vis an exclusive bottom line concern.

''Most of all, we will need to maintain a kind of white-hat integrity in all relationships with patients and public. Only if our profession is perceived as being honestly dedicated to pursuing the highest professional standards will we prevail in the uneasy relationship with business barons.''

Whatever else may be in the offing, Dr. Felch's last principle seems, to me, incontrovertible.

President's Page

continued from page 7

ruin erosions of the bureaucrats and politicians. Start by attending the annual meeting of MASA in Birmingham April 21 through 23. I am positive that you will enjoy the program, but, more importantly, rubbing elbows with your fellow physicians from across the state may generate enthusiasm for participation in organized medicine. We need you; you and the patients you serve need us.

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Volvulus of the Cecum: A Case Report and Review of Literature

T. Nagendran, M.D.,* Chief, Surgical Service, V. A. Medical Center,
S. Ratanasit, M.D.,† Staff Radiologist, V. A. Medical Center

Volvulus, or twisting of the intestine, occurs commonly in the small bowel, the sigmoid colon and the cecum. Rarely, the volvulus occurs in the transverse colon or in the splenic flexure. Volvulus is a relatively rare disease in Britian, Western Europe and North America, but is one of the common causes of acute intestinal obstruction in Eastern Europe and India.

The term ''volvulus of the cecum,'' although in common use, is usually a misnomer because it involves not only the cecum but also the adjacent small bowel and the ascending colon. This condition was first described by Rokitansky in 1841. We would like to present a case of volvulus of the cecum and review the literature briefly.

Case Presentation

A 67-year-old, Black, male veteran who has been in the long-term medical unit of this medical center for the past several years, was seen with abdominal distention, nausea and vomiting. Physical examination of the abdomen revealed generalized gaseous distention with absent bowel sounds. There was no tenderness, no organomegaly or no masses felt on palpation. The previously placed upper midline incision had healed well. Rectum was empty.

Flat and upright abdomen films revealed multiple dilated loops of the small and large bowel. (Figure 1) The initial impression was ileus, probably secondary to urinary tract infection. The patient was transferred to the Intensive Care Unit. Routine lab works were obtained. The nasogastric tube was passed. Intravenous fluids were started, and a Foley catheter was inserted. The patient was observed for about 12 hours, and at the end of the 12 hours, the patient was carried to the X-ray Department where repeat x-rays were made; the x-rays did not reveal any gross change. A barium enema (Figure 2) was obtained at the same time which showed obstruction to the flow of the barium at the hepatic flexure level. The Radiologist's impression was that the patient had large bowel obstruction, secondary to carcinoma of the hepatic flexure. The cecum was found in the mid-abdomen enormously dilated.

After proper preoperative preparation, the patient was carried to the operating room and the abdomen explored through a long midline incision. The abdominal cavity had a minimal amount of adhesions due to previous vagotomy and gastrojejunostomy. There was one adhesion band in the ascending colon immediately distal to the hepatic flexure which measured approximately 2 cms. This was freed and the entire cecum, distal 6 cms. of the ileum and the ascending colon, were found to be twisted approximately 720°. The cecum (Figure 3) was dilated, but it was still viable. Without any difficulty, this was untwisted. The entire cecum was found to be freely redundant and the mesentery was

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thickened and there were multiple lymph nodes. There was no evidence of intraluminal pathology. Due to the psychiatric condition of this patient, it was elected to

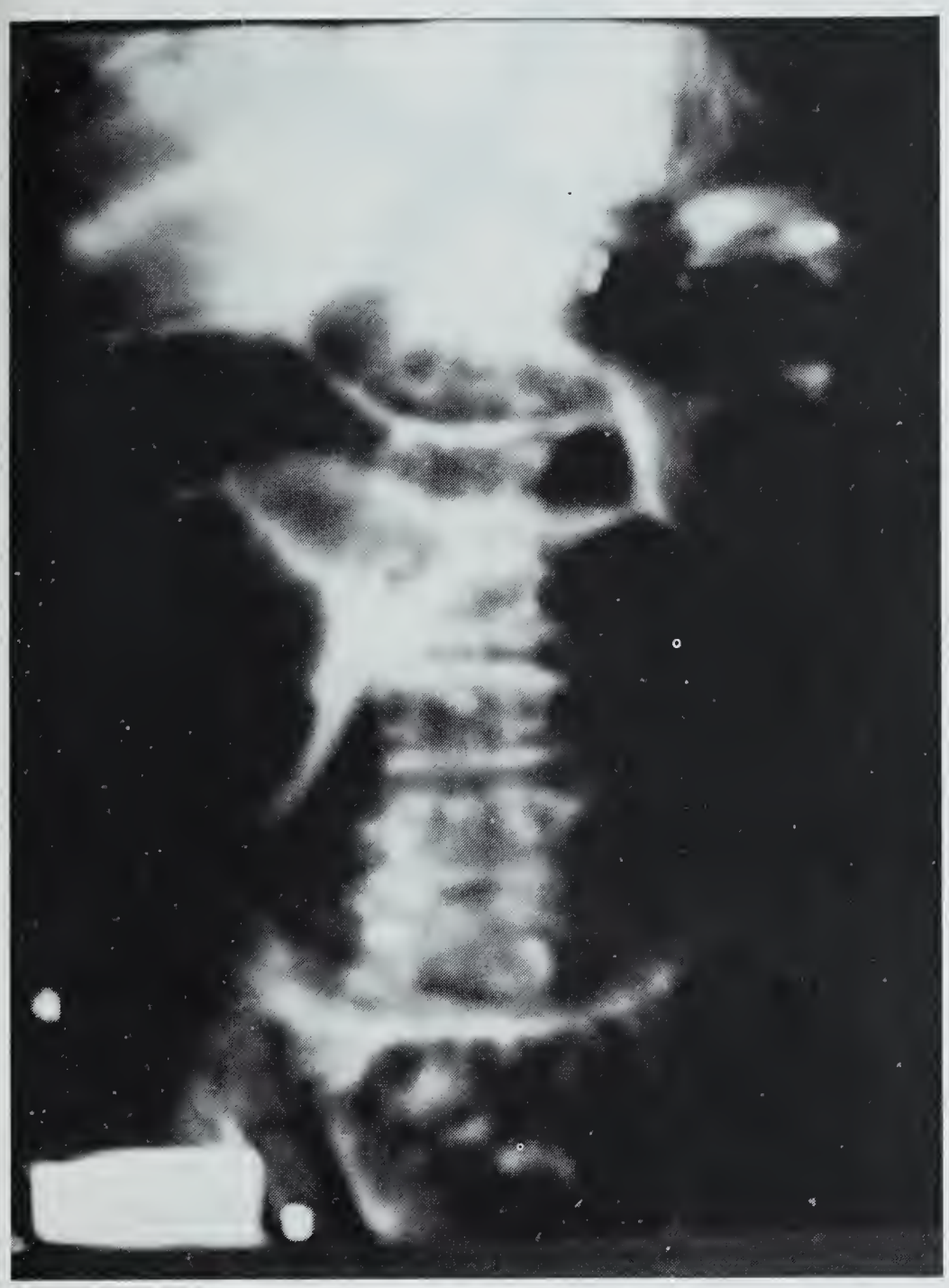


Figure 1. Flat film of abdomen — multiple loops of small and large bowel.

resect the cecum and the terminal ileum and this was carried out — an ileo-ascending colostomy was done. The patient's postoperative course was benign and he is doing well.

Discussion[1, 2]

Volvulus of the cecum was first described in 1841 by Rokitansky. It is most often a torsion of the ileocolic segment in a clockwise direction. The twist varies from 90° to as many as three complete twists. Routine autopsy examinations show that in 20% of the population there is sufficient ability of the cecum to permit pathological rotation. Other predisposing factors cited in the literature are: 1) Dietary intake; 2) Previous abdominal operations or a history of previous inflammation of the peritoneal cavity with resultant adhesion formation; 3) Pregnancy; 4) Other pelvic tumors or cysts which might displace the cecum upward; and, 5) Distal large bowel obstructions whereby a mobile cecum becomes twisted during active peristalsis. Other causes like withdrawal of abdominal pack or undue manipulation of the ileocecal region at the operation or intermittent positive pressure breathing have been associated with the etiology of the cecal volvulus.

Diagnoses: There are no characteristic clinical features to distinguish a volvulus of the right colon from other forms of intestinal obstruction. A plane radiograph of the abdomen may be informative, but diagnoses are often made at laparotomy. The following radiological signs may be helpful to establish the diagnosis: 1) Great distention of the cecum which is often topically placed and usually located in the left upper quadrant of the abdomen; 2) Distended loops of the small intestine located to the right of the cecal gas shadow; 3) Visualization of the ileo-cecal valve when the cecum is outlined by gas; 4) A spiral distortion of the mucous membrane folds in the colon at the point of obstruction; 5) Evidence of small intestinal obstruction; and, 6) Presence of single fluid level in the cecum compared to two large fluid levels in cases of volvulus. A barium enema shows the barium cutoff at the transverse colon and the gas-filled right colon and cecum beyond the level of the obstruction as was demonstrated in our case.



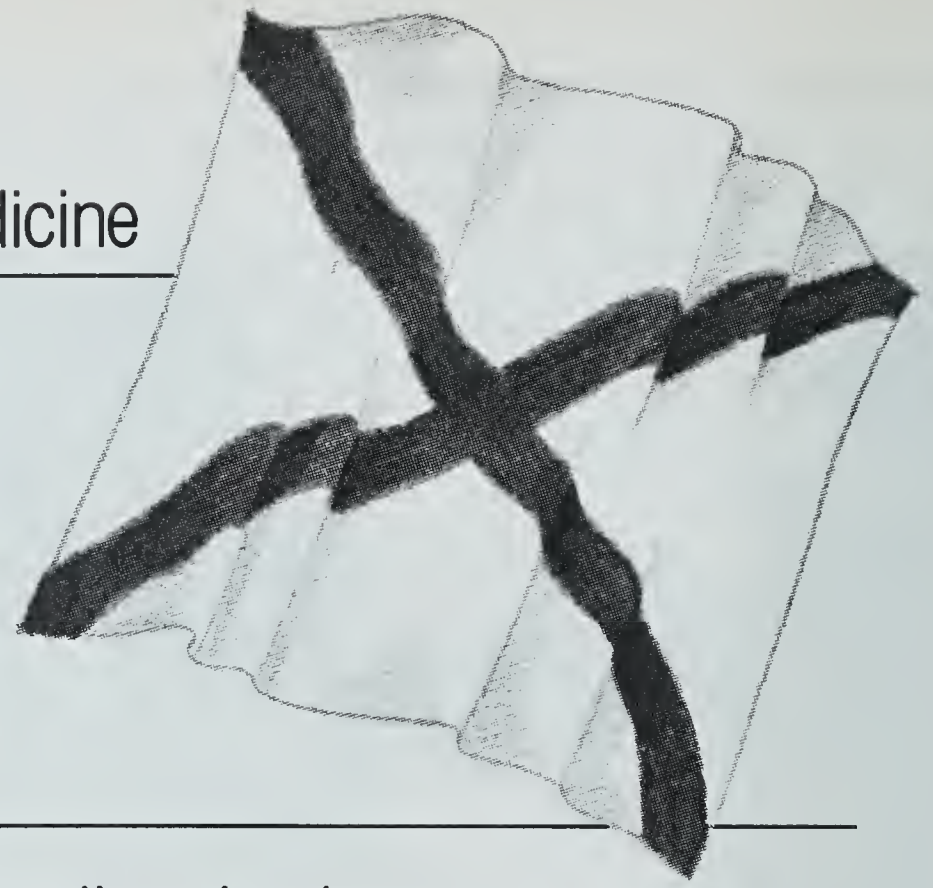
Figure 2. B.E. Note enormously dilated cecum in mid abdomen.

Treatment

Once the diagnosis is suspected, the treatment is surgical. When distortion is possible and gut is viable, reduction is carried out with the fixation of the cecum and right colon to the peritoneum of the right paracecal and paracolic gutter, either by simple suture or by

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International esteem

In 1861, Sims was invited to perform his now-famed fistula operation before the surgical elite of Europe. His writings were translated into German, and he was hailed as a peer by noted French physicians.

Success seemed to stimulate Dr. Sims. Prior to his death in 1883, he gained credit for other major surgical advances—a method for amputating the cervix uteri, a significant description of the condition he called "vaginismus," his procedure for cholecystotomy and his important medical paper on aseptic intraperitoneal invasion.[2]

Dr. Sims worked in Europe and in New York City after 1853—and his statue stands today in New York's Bryant Park.[2] But he accomplished his most significant work—and is esteemed in medical history—as the gifted surgeon from Alabama.

References: 1. Lyons AS, Petrucelli RJ II: *Medicine: An Illustrated History.* New York, Harry N. Abrams, Inc., 1978, p. 523. **2.** Garrison FH: *An Introduction to the History of Medicine,* 4th ed. Philadelphia, W. B. Saunders Company, 1929, pp. 509,510.



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References: 1. Rickels K: Drug treatment of anxiety, in *Psychopharmacology in the Practice of Medicine,* edited by Jarvik ME; New York, Appleton-Century-Crofts, 1977, p. 316. **2.** Feighner JP *et al: Psychopharmacology 61:*217-229, Mar 1979. **3.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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Figure 3. Resected specimen-ileocecum.

raising a peritoneal flap and stitching it to the front of the bowel so that the cecum fits into a sort of retroperitoneal pouch. But unfortunately, this operation is associated with high incidence of recurrence. An additional method of anchoring the right colon is the establishment of the cecostomy. When gangrene is present, either right hemicolectomy and end-to-end anastomosis or exteriorization are done, depending upon the patient's general condition.

Conclusion

A case of cecal volvulus is presented. Literature is briefly reviewed. ⊡

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AUXILIARY



Mrs. Patty Estock
President, A-MASA

DUI: A Crime — Not An Accident

Frightening figures continue to pile up in the drunken driving death toll. Estimates from the National Safety Council show that more than 25,000 people died in alcohol-related wrecks in 1981, a figure that has been consistent over the past decade and is not expected to change drastically for a long time. That is more than the number of deaths by guns and knives in one year.

The Alabama Office of Highway and Traffic Safety puts the state's 1981 highway alcohol death count at 474 and 7,422 people injured in alcohol-related automobile accidents.

Out of concern about this problem the Auxiliary to the Medical Association of the State of Alabama introduced the following resolution to the 1982 House of Delegates of A.M.A. Auxiliary. Subject: Enforcement of Drunk Driving Laws —

WHEREAS, The American Medical Association Auxiliary has long recognized and emphasized the importance of the prevention of alcohol abuse and its consequences; and

WHEREAS, People who drive under the influence of alcohol kill 26,000 people a year — almost half of all traffic fatalities; and

WHEREAS, For everyone who is killed, eight more people are disabled by these accidents; and

WHEREAS, States which enforce laws against driving under the influence of alcohol show a reduced number of fatalities and disabling accidents; therefore be it

Resolved, That the AMA Auxiliary advocate and encourage state and county auxiliaries to become involved in programs to enforce and strengthen drunk driving laws; and be it also

Resolved, That these programs be undertaken only with the approval and cooperation of the corresponding state and county medical societies/association. This resolution was passed and triggered a new awareness and involvement on the part of our national organization. The primary focus of the national organization is to increase the awareness not only of its members but the public at large regarding the scope and severity of this problem.

At our state level this problem was the central focus of our Fall Leadership Confluence dinner. The dinner discussion "Drunk Driving — What Is The Answer?" featured State Senator Paschal Vacca, Chmn. of the Safety Coordinating Committee, Dr. Russ Fine, Associate Professor of Rehabilitation Medicine at UAB, Mrs. Russ Fine (Dee), President & Chief Operating Officer of Alabama's first MADD Chapter, and Mary Lou Street, Executive Director of the Birmingham DUI Action Program.

According to Dee Fine "The problem of the drunk driver has been with us for far too long. Too many people have been killed and maimed on our streets and highways. Too many families have been torn apart by the tragedy of needless, senseless and totally preventable deaths.

"Last year alone, over 450 Alabamians were killed on our highways at the hands of drunk drivers — that's more than one person every 18 hours, 7 days a week, 365 days in a row. Earler this summer when a Pan American jet liner crashed outside New Orleans, Louisiana approximately 150 people lost their lives. It was a terrible crash and news of the tragedy grabbed instant headlines on all radio, television and newspaper reports. But consider this, we had the equivalent of three Pan Am crashes in Alabama last year and nobody batted an eye. What's worse, is that not one of those who died at the hands of drunken drivers should have been killed or even hurt — the crashes should not have even happened.

"Drunken drivers butcher Americans faster than the

Viet Nam war, and cost society over 5 billion dollars a year in court time, rehabilitation, lost earnings and other indirect expenses. When polio was killing 300 people a year — three hundred people in an entire nation — parents feared for their childrens lives, but drunk drivers will kill more than 86 times that number in 1982 alone! When toxic shock syndrome killed a few unfortunate women a couple years ago, the adverse publicity killed a product for the Procter and Gamble Company, and a few isolated instances of botulism destroyed an entire soup company. But the same public that reacts swiftly to such dangers as these, has not until recently been aroused by the fact that life is lost every 21 minutes in alcohol-related crashes and one out of every two Americans will, according to National Safety Council estimates be involved in an alcohol related crash.

''Last year, over seven thousand four hundred Alabamians were seriously injured at the hands of these same drunk drivers. Some of these will never walk again, some are horribly burned, some are blind, some have lost arms and legs, and none of them should have been hurt at all. None of them would have been hurt at all had it not been for the drunken drivers. It is an auspicious distinction, but it is nonetheless a fact that there are only a mere dozen states — only twelve — that have worse highway traffic fatality statistics than Alabama. These terrible statistics are not the fault of our law enforcement officials. The problem is, our current laws do not deter drunk drivers because too many drunk drivers have gotten off with small fines and minimal punishment. We need mandatory jail sentences. We need high fines — fines that will cost a violator so much money that they simply will not risk driving while intoxicated. We need confiscation of the drunk drivers automobiles. It is absolutely necessary that we impress upon anyone that will violate our law that if you drink and drive and get caught it will cost you severely in Alabama.

''While these measures may seem severe, bear in mind that the odds of getting caught driving while under the influence of alcohol is only 1 in 2,000. Thus, if punishment is to deter, severity must compensate for uncertainty. Fear of punishment — punishment sure, severe, and well publicized does, without a doubt, influence drinkers who choose to drive.

''Further, we should immediately raise the drinking age to 21 — so young people do not have the opportunity to learn to handle alcohol and automobiles at the same time. The states that have raised their drinking age have markedly lowered their teenage highway fatality statistics.''

A January 1983 article in our own auxiliary's *Facets* magazine emphasizes that ''You Can Make the Difference.'' It indicates that ''Involvement in the problem of drunk driving can't come only from those whose lives have been tragically altered because someone who had too much to drink got behind the wheel of an automobile.''

There are two prime areas for involvement — public awareness and legislative action, individually or collectively.

One person whose daughter was killed by a drunk driver offered this advice ''The main thing is raising public consciousness — making driving drunk socially unacceptable. It hasn't been until now.'' How do you make driving drunk unacceptable? By letting people know about the ripple effect which occurs when an accident happens — on the driver, on the victim of an accident, on the victim's family and friends, on the community. The way to do this is through public forum which explores the problem of drunk driving, using statistic and examples. They can be a concrete way to make people aware and to get them involved.

Another way to draw awareness to the problem is on the personal level. If you're having dinner with someone who has too much to drink, offer to drive them home. If you have a party at your home don't push alcoholic beverages — offer coffee — and once again, see that anyone who can't drive doesn't drive.

Let bar and restaurant owners or the owners of other establishments which serve alcoholic beverages know that the community is concerned about the problems of drunk driving. Get them to install breath analyzers to help people ascertain whether they are able to drive safely.

Like awareness, legislative involvement is a key in the drunk driving issue. Look into your state laws to see what provisions they contain. Are the penalties strict enough? Do the laws provide for mandatory jail time and participation in alcohol rehabilitation programs? What are the laws concerning the specified blood alcohol content level necessary to constitute a rebuttable or conclusive presumption of drunk driving? What is the legal drinking age in your state? Are there prohibitions of open liquor bottles in motor vehicles?

Once you have the information, communicate with your local and state legislatures. Let them know of your concern about the issue, and that you are aware of the state laws and where they need strengthening. Keep communicating with them until something is done.

In both the awareness and legislative areas, work with other organizations in your community. It can't be said enough that there is strength in numbers; and combining your own forces with other community organizations can give you the weight your argument needs to get the results you want.

The problem of drunk driving won't go away until people make it go away. Drunk driving is everyone's problem: AND YOU CAN MAKE THE DIFFERENCE.''

Patty

JOURNAL of the Medical Association of the State of Alabama

VOL. 52, NO. 10, APRIL, 1983

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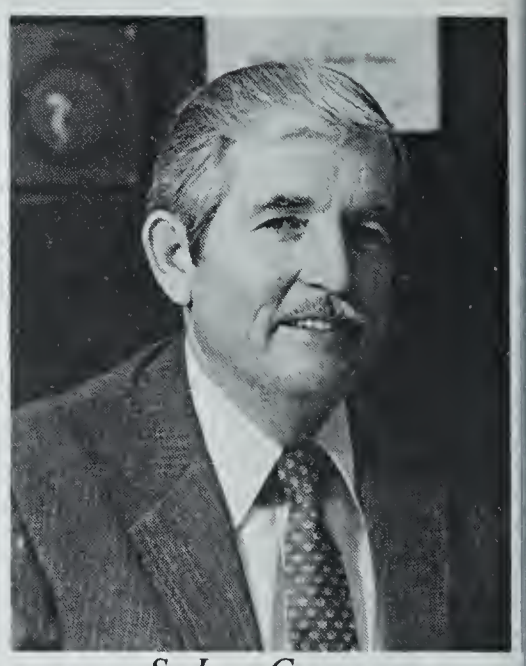
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EXECUTIVE DIRECTOR



S. Lon Conner
Executive Director, MASA

The Torch Is Passed

A year ago in these pages, MASA President Ronald E. Henderson, M.D., revealed in Bill McDonald's profile of him that he was given by a personal sense of destiny, formed in childhood but given body and substance by a near-fatal automobile accident several years ago.

Dr. Henderson confided in the membership, then and subsequently, his impatience with the ostrich approach to the problems facing medicine, and he revealed that he had higher aspirations of leadership in the profession. Not because he wanted glory but because he felt a need to serve.

I can personally attest to a full 12 months of Dr. Henderson's demonstrating that he was not just whistling Dixie, as they say. In a year packed with many perils, old and new, he has repeatedly run right at them, without hesitating, temporizing or finding reasons not to take the plunge.

During his tenure as President, I think you will agree, the Association has not once buried its head in the sand of apathy or surrender. He is an able and energetic spokesman for organized medicine whose talents have already been duly noted in the inner sanctums of the AMA. I believe the profession will be hearing a lot more from Dr. Henderson in the years ahead.

As he surrenders the gavel this month in Birmingham to H. Hamilton Hutchinson, M.D., he does so, I am sure, with confidence that his successor is another top-drawer leader. Dr. Hutchinson has long enjoyed virtually unequivocal confidence among his medical colleagues in Montgomery. No higher testament to their esteem need be given than that many of them have chosen him as their personal physician — the doctor's doctor. Similarly, the present Governor of the State has long had Dr. Hutchinson as his physician. You may be sure that when Gov. George C. Wallace picked him years ago he did so on the recommendation of other physicians. It is Mr. Wallace's style that when he wants the best man for a particular job he asks for a consensus of experts in that field, a technique that saves time and minimizes mistakes.

Dr. Hutchinson was born and bred in Montgomery and has practiced here since 1949 (with time out for Korean War military medical service). He is a scholar and gentleman of the old school: soft spoken in his measured judgments but granitic in his resistance to those who want to weaken or hamstring his profession — the iron hand in a velvet glove.

A incident several years ago should illustrate these qualities: Called to testify before a legislative committee considering a bill to modernize the definition of clinical death, Dr. Hutchinson lectured quietly and convincingly on the new knowledge of brain death. He did not patronize. Neither did he stoop to ridicule the most absurd questions, as a less diplomatic witness might have, but answered them all fully and respectfully, as if they were the most sensible question in the world.

This manner bespeaks his belief that the public and its representatives are reasonable and can be reached with reason, if physicians will only make patient efforts to explain issues that get more and more complex with every passing year.

When any discussion roams far afield into realms of unreality, Dr. Hutchinson feels no compulsion to decry the fantasy. He simply stops talking, answering empty verbiage with thundering silence.

Dr. Hutchinson is convinced, as are many other knowledgeable physicians, that the zero hour is approaching for organized medicine to show that it can indeed put its own house in order *vis a vis* rising costs. A major theme of Dr. Hutchinson's presidency will be that, with the clock hands approaching midnight, physicians must now, through every avenue open to them, make tangible contributions to cost containment or forever lose the prerogative.

Government and industry are moving quickly into what they perceive to be a vacuum left by the failure of the medical profession to take a strong, viable lead-

continued on page 48

Take its Measure

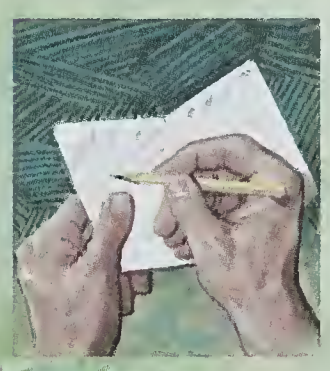
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RUFEN®
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Far-Reaching Effectiveness for Arthritis Patients

Rufen® offers your patient effective relief, both as first therapy or after other potent medications fail. In comparable trials with indomethacin[1,2] sulindac,[3,4] and other antiarthritic agents,[5-7] findings consistently demonstrate high improvement with ibuprofen (Rufen) by such objective and subjective measures as reduction of swelling, improved grip strength,[1] reduced morning stiffness,[1] better ambulation,[1] improved range of motion,[4] reduction and relief of pain.[1-5]



Low Score in Side-Effect Risk

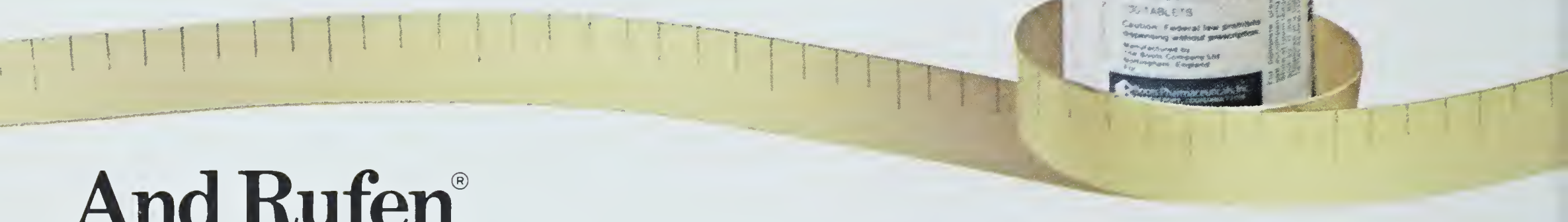
Through more than 13 years of worldwide use, ibuprofen continues to demonstrate exceptional gastrointestinal tolerance vis-a-vis aspirin and other antiarthritic agents. In a recent series of double-blind trials of ibuprofen, naproxen and other NSAID's, only placebo was shown to produce less G.I. lesions than ibuprofen on gastroscopic examination.[5]

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See next page for brief summary of prescribing information.

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Even in arthritic patients with a history of GI disease



And Rufen® Measures Up Best

Over a five-year period, ibuprofen was administered to 64 patients with known peptic ulceration and 42 with known gastric intolerance to other antiarthritis drugs.

Twenty-six patients remained in treatment, 23 left treatment following remission, and 35 dropped out for reasons unrelated to side effects. In this specially selected group of GI-intolerant patients, only 13 (12.3%) discontinued ibuprofen because of GI intolerance.

"Any drug used in the control of the symptoms of the chronic arthritis must be tolerated for long periods without undue gastric discomfort...From this study it appears that ibuprofen is eminently suitable."[8]

Peptic ulceration and GI bleeding, sometimes severe, have been reported. Rufen® should be given under close supervision to patients with a history of upper GI tract disease.

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RUFEN® (ibuprofen) Tablets

INDICATIONS AND USAGE: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in the long-term management of these diseases. Safety and effectiveness have not been established for Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain. Treatment of primary dysmenorrhea.

CONTRAINDICATIONS: Patients hypersensitive to ibuprofen, or with the syndrome of nasal polyps, angio-edema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory drugs (see WARNINGS).

WARNINGS: Anaphylactoid reactions have occurred in patients hypersensitive to aspirin (see CONTRAINDICATIONS). Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration, perforation, or gastrointestinal bleeding can end fatally, however, an association has not been established. Rufen should be given under close supervision to patients with a history of upper gastrointestinal tract disease, and only after consulting the ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be attempted. If Rufen must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

PRECAUTIONS: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If developed, discontinue Rufen and administer an ophthalmologic examination.

Fluid retention and edema have been associated with Rufen; caution should be used in patients with a history of cardiac decompensation.

Rufen can inhibit platelet aggregation and prolong bleeding time. Use with caution in patients with intrinsic coagulation defects and those taking anticoagulants.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy, this therapy should be tapered slowly when adding Rufen.

DRUG INTERACTION: *Coumarin-type anticoagulants.* The physician should be cautious when administering Rufen to patients on anticoagulants.

Aspirin. Concomitant use may decrease Rufen blood levels.

PREGNANCY AND NURSING MOTHERS: Rufen should not be taken during pregnancy nor by nursing mothers.

ADVERSE REACTIONS: Incidence greater than 1%. Gastrointestinal: The most frequent adverse reaction is gastrointestinal (4 to 16%). Includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of GI tract (bloating and flatulence). Central Nervous System: dizziness*, headache, nervousness. Dermatologic: rash* (including maculopapular type), pruritus. Special Senses: tinnitus. Metabolic: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS). *Incidence 3% to 9%.

Incidence less than 1 in 100. Gastrointestinal: gastric or duodenal ulcer with bleeding and/or perforation, hemorrhage, melena. Central Nervous System: depression, insomnia, confusion, emotional lability, somnolence, aseptic meningitis with fever and coma. Dermatologic: vesiculobullous eruptions, urticaria, erythema multiforme, Stevens-Johnson syndrome and alopecia. *Special Senses:* hearing loss, amblyopia (blurred and/or diminished vision, scotomata and/or changes in color vision) [see PRECAUTIONS]. Hematologic: neutropenia, agranulocytosis, aplastic anemia, hemolytic anemia (sometimes Coombs' positive), thrombocytopenia with or without purpura eosinophilia, decreases in hemoglobin and hematocrit. Cardiovascular: congestive heart failure in patients with marginal cardiac function, elevated blood pressure. Allergic: syndrome of abdominal pain, fever, chills, nausea and vomiting, anaphylaxis, bronchospasms (see CONTRAINDICATIONS). Renal: acute renal failure in patients with preexisting significantly impaired renal function, decreased creatinine clearance, polyuria, azotemia, cystitis, hematuria. Miscellaneous: dry eyes and mouth, gingival ulcers, rhinitis.

Causal relationship unknown. Gastrointestinal: pancreatitis. Central Nervous System: paresthesias, hallucinations, dream abnormalities, pseudotumor cerebri. Dermatologic: toxic epidermal necrolysis, photoallergic skin reactions. Special Senses: conjunctivitis, diplopia, optic neuritis. Hematologic: bleeding episodes. Allergic: serum sickness, lupus erythematosus syndrome, Henoch-Schonlein vasculitis. Endocrine: gynecomastia, hypoglycemia. Cardiovascular: arrhythmias (sinus tachycardia, bradycardia, and palpitations). Renal: renal papillary necrosis.

OVERDOSAGE: Acute overdosage, the stomach should be emptied. Rufen is acidic and excreted in the urine, alkaline diuresis may benefit.

DOSAGE AND ADMINISTRATION: Rheumatoid arthritis and osteoarthritis, including flareups of chronic disease: Suggested dosage 400 mg t.i.d. or q.i.d.

Dysmenorrhea: 400 mg every 4 hours as necessary.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for the relief of pain. *Do not exceed 2,400 mg per day.*

CAUTION: Federal law prohibits dispensing without prescription.

PRESIDENT'S PAGE



Ronald E. Henderson, M.D.
President, MASA

Organized Medicine Wants You!

A short twelve months ago I sat down to write my first column for the President's Page. Having served on the Board of Censors, I had some idea of the duties and responsibilities of the President of our Association. In retrospect, I find I had absolutely no concept of this time as a learning opportunity. This past year has been exciting, stimulating, frustrating, fatiguing, but above all, rewarding. It has been a true growth experience for me, and I thank you for allowing me to serve as the President of our Association.

In this, my last opportunity to contribute to this column, I want to share some of the newly gained insights with you on a very personal introspective level. I intend and sincerely hope that, as you read this as a MASA member, you will take it as intensely personal. I ask that you perform an internal audit, evaluating your own God-given talents and abilities and deciding where you might best serve your patients through your profession.

There are a multitude of dangers and opportunities facing the medical profession at the present time. The threat to the independent practice of medicine is real. Regardless of the actions of the members of the profession that share my views, it will be difficult to predict and recognize the major modality of practice in the year 2000. Monumental changes are just ahead.

Because of the magnitude of change about to occur, there is the danger that the system that evolves will represent a threat to the patients that we serve. On the other hand, however, never before in your lifetime or mine, has there been such an opportunity to make meaningful contributions.

These contributions can be in the form of continuing to be a dues paying member of organized medicine, but that alone is not enough. Less than half of the active practicing physicians of this country are contributing members to organized medicine. The non-members are freeloaders. With no contribution in money or time, they expect and reap the benefits of our marvelous profession. I do not want you to continue to allow this to happen. Peer pressure is a powerful tool, and I ask you to use it to stimulate the freeloaders to pay their way.

You can improve your performance as your patients' true advocate. This advocacy should not only involve the quality of medical care that your patient receives, but also the access to medical care.

In these troubled economic times if an established patient of yours is no longer able to afford your services, improve your image and the image of your profession by serving that patient without charge until that patient can afford to pay your fee. If your patient cannot afford to utilize your hospital, make sure that you or your office staff fully investigate the alternatives available to your patient. It is indeed more blessed to give than to receive, and actions such as these will be rewarding to you in many ways and be a blessing to our profession at a time when we need a new glow.

Become more involved with your community, your civic clubs, and the political arena, if your internal audit leads you in this direction. For whatever reasons, physicians are not making the contributions as a group as they have done in other periods in our country's history.

Organized medicine needs you. I have been appalled at the disinterest and apathy I have encountered in my travels this year, not only in Alabama but in all parts of

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Rocky Mountain Spotted Fever — A Reminder

By LeRoy F. Harris, M.D.*

Rocky Mountain Spotted Fever (RMSF) is the most common rickettsial infection in the United States with the majority of cases occurring in the southeastern and south Atlantic states between mid-April and mid-September. During 1982 we cared for 8 serologically documented cases of RMSF in Huntsville, Alabama hospitals. Transmitted to man by a tick vector, the infection is characterized by fever, rash, and multi-organ involvement. Treatment is with tetracycline or chloramphenicol and prevention is accomplished best by avoidance of ticks and their prompt removal from the human host.

Key Words:
Rocky Mountain Spotted Fever
tick vector
fever
rash

During the spring and summer of 1982 we cared for 8 serologically documented cases of Rocky Mountain Spotted Fever (RMSF) in Huntsville, Alabama hospitals. This incidence compares favorably with the average yearly rate of cases reported in large review articles about RMSF[1, 2, 3] and suggests that northern Alabama is an endemic area for this infection. By reviewing our eight cases we hope to alert northern Alabama physicians to consider this disease in the differential diagnosis of any febrile exanthem occurring during mid-April through mid-September.

Results

Table I outlines the admission features of 8 cases of RMSF seen in Huntsville, Alabama hospitals during 1982. The 8 cases occurred between April and July. Three cases occurred in children, 5 cases were in adults, and there was a 3:1 male predominance. In all but 2 cases a tick was found on the patient. All patients were febrile with temperatures ranging from 100.4° C to 105.6° C and in all patients a rash, variously described as macular, papular, and petechial was present. Each had evidence of multi-organ disease including the brain (headache, change in sensorium, meningismus, abnormal cerebrospinal fluid formula), liver (jaundice, abnormal liver function test), heart (arrhythmia, conduction defect, hypotension), intestine (occult fecal blood), kidney (hematuria, pyuria, abnormal renal function test), lung (hypoxemia, pulmonary infiltrate), and bone marrow (anemia, thrombocytopenia). The white blood cell counts ranged from 4,500/cu mm to 19,500/cu mm and the majority were less than 10,000/cu mm. Hyponatremia was common, occurring in 6 of 8 patients. Seven of 8 patients were treated with a

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tetracycline or chloramphenicol for at least 10 days, became afebrile within 2 to 8 days and did not relapse. One patient who was treated with chloramphenicol for 6 days relapsed with fever and a rash 6 days after discontinuing the antibiotic. He was retreated with chloramphenicol for an additional 7 days and did not develop a subsequent relapse. Complete recovery occurred in 6 of 8 patients. In the 2 patients who developed long term sequelae, one had persistently abnormal liver function tests and the other patient remained with an abnormal sensorium one month after admission. The diagnosis of RMSF was confirmed serologically by the complement fixation test specific for Rickettsia rickettsii, the etiologic agent of RMSF. The acute titers were less than 1 : 8 and the convalescent titers ranged from 1 : 16 through 1 : 512. The duration between the acute and convalescent titers ranged from 8 to 19 days.

Discussion

RMSF is the most common rickettsial infection in the United States. The etiologic agent, Rickettsia rickettsii, is found in a variety of mammals including dogs, cows, horses, rodents, rabbits, and deer as well as in birds. The infection is transmitted to man by a tick vector. The wood tick, Dermacentor andersoni, is responsible for transmission of the disease in most western states and the dog tick, Dermacentor variablis, accounts for transmission of the majority of infections in the southeastern and south Atlantic states. The Lone Star tick, Amblyoma americanum, is an important vector in the Southwest. The majority of infections occur when man is bitten by the tick vector as it takes a blood meal. Rickettsia also can gain access to the body through skin abrasions from infected tick juices (as occurs with squeezing infected ticks) or by inhalation of infectious aerosols (as occurs in the laboratory).[4]

RMSF initially was recognized in the Bitterroot Valley of Montana and not until 1926 was a case identified east of the Mississippi River. Subsequently the disease has shifted to the Southeast and South Atlantic which now account for over 80% of cases.[5] Since 1960 an increase in the number of cases was reported reaching a peak of 1,115 in 1977. During 1978-1980 there was a slight decline and leveling off of the number of reported cases. The vast majority of cases occurs between mid-April and mid-September and all of our cases occurred between April and July. The incidence of RMSF is highest in children and young adults and the case-fatality rate is higher in adults older than 30 years than in younger persons. The majority of our patients were older than 40 years and there was no mortality. Rickettsia gain access to the human host through the appropriate tick vector. The organisms invade vascular endothelium and cause a rickettsemia and vasculitis which account for the multi-organ involvement seen in RMSF. All of our patients had at least 2 and averaged 3-4 organs involved during their illness. The incubation period ranges from 2 to 14 days followed by the initial manifestations of fever, malaise, headache, and myalgia. In another 3 to 4 days the hallmark of RMSF, a rash, appears. It usually begins on the extremities including the palms and soles and spreads centrally and variably as described as macular, papular, petechial, or ecchymotic. All of our patients manifested fever and rash, however, up to 10% of patients have no rash during their illness.[7]

Neurologic involvement is common in RMSF and was encountered in three-fourths of our patients. Manifestations include headache, change in sensorium, meningismus, and abnormal cerebrospinal fluid formula. Rarely seizures, focal motor signs, and ataxia occur.[8] RMSF also may involve the liver and gastrointestinal tract in up to 80% of cases and was found in slightly over one-half of our patients. Jaundice, hepa-

TABLE I
ROCKY MOUNTAIN SPOTTED FEVER
HUNTSVILLE, ALABAMA HOSPITALS

Case #	*Age*	*Sex*	*Tick Exposure*	*Fever*	*Rash*	*WBC (cu mm)*	*Hypo-natremia*	*Complement Fixation (acute, convalescent)*	*Organ Involvement*
1	12	F	No	Yes	Yes	4,500	No	<1:8, 1:64	Brain, bone marrow
2	67	F	Yes	Yes	Yes	11,500	Yes	<1:8, 1:32	Brain, liver, heart, lung
3	43	M	Yes	Yes	Yes	19,500	Yes	<1:8, 1:256	Brain, liver, heart, lung, bone marrow, kidney
4	50	M	Yes	Yes	Yes	14,800	Yes	<1:8, 1:512	Brain, liver, bone marrow
5	11	M	No	Yes	Yes	8,400	No	<1:8, 1:256	Kidney, lung
6	8	M	Yes	Yes	Yes	6,600	Yes	<1:8, 1:256	Liver, intestine
7	71	M	Yes	Yes	Yes	4,500	Yes	<1:8, 1:128	Brain, liver, heart, kidney, bone marrow
8	87	M	Yes	Yes	Yes	8,200	Yes	<1:8, 1:16	Brain, kidney, bone marrow

tomegaly, and abnormal liver function tests are the most common hepatic manifestations while nausea, vomiting, and diarrhea are prominent gastrointestinal symptoms.[9] Abdominal pain may be severe and simulate acute appendicitis.[10]

The cardiovascular system invariably is affected in RMSF because the basic pathologic lesion of the infection is a vasculitis. Direct myocardial involvement with arrhythmias and conduction defects also can occur and was seen in almost one-half of our patients. Hypotension is secondary to increased vascular permeability resulting in extravasation of fluid from the vasculature but myocardial failure is absent.[11] Renal involvement in RMSF was present in one-half of our patients and ranges from an abnormal urinary sediment to acute renal failure. Although interstitial nephritis is the principal pathologic lesion, renal failure is a consequence of hypovolemia and subsequent acute tubular necrosis.[12]

Pulmonary manifestations of RMSF consist of hypoxemia and parenchymal infiltrates on chest roentgenogram and appeared in slightly less than one-half of our patients. Respiratory failure may supervene precipitated by noncardiogenic pulmonary edema and bacterial superinfection.[13] Hematologic involvement is common in RMSF and occurred in over one-half of our patients. The total white blood cell count is usually normal but leukocytosis can occur as seen in 3 of our patients. Bone marrow depression with anemia and thrombocytopenia is seen as well as a coagulopathy, the etiology of which is uncertain.[7]

Initially the diagnosis of RMSF is clinical. Any patient residing in an area endemic for RMSF (such as northern Alabama) who has a history of tick exposure and presents with fever and rash during mid-April through mid-September should be assumed to have RMSF until proven otherwise. The diagnosis is confirmed by a variety of serologic tests demonstrating a rise in antibody titer. The Weil-Felix test measures the serum's ability to agglutinate various strains of Proteus organisms, specifically Proteus OX-19 and OX-2. Increase in titer usually occurs after 7-10 days but may be delayed or prevented totally in the face of early antibiotic therapy. False positive reactions may occur with proteus infections, leptospirosis, hepatitis, and other rickettsial infections. The complement fixation test is more specific for the spotted fever group of organisms but requires a longer time before it becomes positive.[14] Earlier diagnosis may be obtained by immunofluorescent staining of tissue for rickettsia. Organisms may be identified as early as the fourth day of illness and the procedure appears to be very specific.[15]

The differential diagnosis of RMSF is extensive but the 2 most common infections are measles and meningococcemia. Measles and especially atypical measles may simulate RMSF but usually can be distinguished by the presence of Koplik spots and a rash which starts on the face and proceeds down the body. Meningococcemia tends to be a more fulminant disease with early development of petecchiae and purpura.[14]

Treatment of RMSF involves early initiation of appropriate antibiotic therapy and vigorous supportive care. Oral or intravenous administration of tetracycline (25-50 mg/kg/day) or chloramphenicol (50 mg/kg/day) is continued for 2-3 days after the patient becomes afebrile and for a minimum of 5-7 days.[14] Our patients received doxycycline (200 mg/day) in place of tetracycline and this antibiotic appeared equally as efficacious as chloramphenicol. One of our patients relapsed after a 6 day course of chloramphenicol but responded quickly to its reinstitution without subsequent relapse. Cautious administration of intravenous fluids is required to prevent tissue edema (eg. noncardiogenic pulmonary edema) secondary to increased vascular permeability. There is no commercial vaccine available for RMSF and prevention is accomplished best by avoidance of ticks and their prompt removal from the human host. Prophylactic antibiotics only postpone the onset of illness and thus have no place in the prevention of RMSF.[7]

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Modern Methods in the Treatment of Acne

Paul G. Reque, M.D.*

Whereas much of the literature recently reviewed about the treatment of acne vulgaris seems to lean toward a rationalization of the suggested etiologic background of acne vulgaris, it is generally agreed that the real cause or causes of acne are unknown. The writer was very surprised recently while preparing this presentation to come upon an article written by Dr. Albert E. Carrier of Detroit, Michigan, titled, ''Acne and Its Treatment,'' in the *American Journal of Dermatology and Genito-Urinary Diseases,* Vol. 1, No. 1, dated April, 1897, from St. Louis, Mo. Without boring you with the reading of the entire article, here is a list of the conclusions drawn by Dr. Carrier:

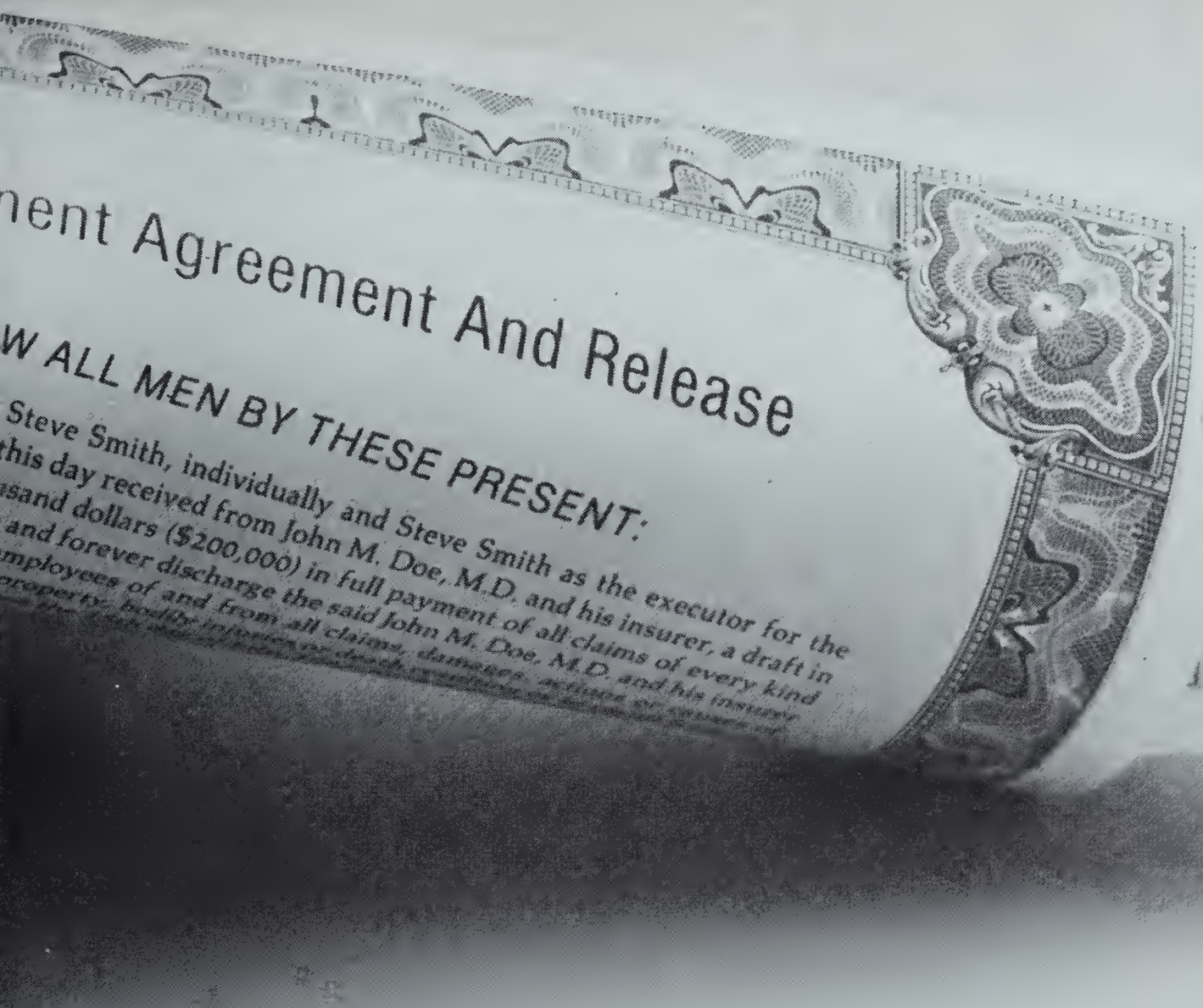
1. The puberal period is not responsible for the disease.
2. Obstruction of the outflow of sebum is the prime factor in the formation of acne lesions.
3. The obstruction of the gland is due to one or the other of two conditions — either a change in the composition of the sebum whereby it is rendered too solid for expression, or a cornification of the cells of the hair follicle and closing the sebaceous duct.
4. Pustular acne is due to germ invasion, but it is not necessary to hold a specific germ responsible for the lesion.
5. The best results are obtained from local treatment that is directed to germ destruction and free flow of sebum.

Remember all of these ideas were held by Dr. Carrier to be true almost 100 years ago, and yet they are valid today no matter by whom or how the statements are embellished. They are too simple to explain all that we encounter in acne patients but as a strong platform to rationalize treatment they have not been refuted. Imagine how happy Dr. Carrier would have been to have our present antibiotics for his use; he really only had mercurials and sulfur externally and arsenic internally, and perhaps did very well. Using the principles drawn from his conclusions, this article will dwell primarily on the physical aspects of treating acne. For the sake of clarity acne may be categorized in five clinical groups:

1. *Acne oleosa* with comedo-formation, and oily skin.
2. *Acne papulosa,* with small sub-epidermal papules and superficial milia, but little or no inflammatory response, and oiliness.
3. *Acne pustulosa,* with papules, pustules, comedones *and* inflammation.
4. *Acne conglobata,* or cystica, with all of the above plus deep soft bluish-red gelatinous nodules, and

* Birmingham, Alabama.


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water. Repeat 2 or 3 times daily as
or as directed by your physician.
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5. *Pyoderma faciale,* the most severe and eruptive form of acne to the point of physical disability.

In all these categories, systemic or topical antibiotics are usually used, the most frequent being tetracyclines, erythromycin, minocycline, Keflex® and clindamycin.

The major physical means for the treatment of acne are, carbondioxide slush, comedone extraction and local acne surgery (incisional drainage), ultra-violet light, cryotherapy, intra-lesional injections, x-irradiation, and dermabrasion either by mechanical wheel, or ''sandpaper-abrasion.'' Each has its place in the individual patient-response, and must be ''tailored'' to each patient. None of these modalities are new, and carbon-dioxide slush was used at least 50-60 years ago, as was x-irradiation. Whereas newer therapies have reduced the frequency for which each is needed, there are times when they are helpful and may promote more rapid resolution of acne lesions.

1. *Carbon-dioxide slush* is made of precipitate of sulfur, crushed, solid carbon dioxide, in acetone, the proportion of each not being critical. The temperature usually reaches about 100°F. below zero when the mixture has stood 15 minutes. It is applied with a cotton-pad, or gauze-pad on an applicator with gentle pressure, with only seconds of exposure to a single area, or enough to frost the skin. Only areas that are involved are treated. The response is an immediate but temporary blanching of skin, increased dryness, and shortly a reflex dilitation of the skin-capillaries.

It is especially useful in the acne oleosa with comedones. It may produce desired dryness in papulo-pustular acne.

Avoid excessive pressure (pigmentation) or prolonged blanching. Some patients are sensitive to sulfur products.

2. *Acne surgery,* consisting of comedone extraction with dermatologic extractors is very helpful in early non-inflammatory acne. Pustules may be incised with a stylet but care must be used to avoid excessive scarring.

3. *Ultra-violet light,* in the 230 to 300 nm range will produce erythema and desquamation. It will enhance biologic activity as evidenced by increasing WBC counts if given more generally than only on affected areas. It is topically bacteriostatic. Tanning-rays are of limited usefulness. Weekly treatments are usually adequate, to the point of mild erythema. Do not advocate home UVL sources unless generated by time-control switches, and quartz-generators.

4. *Cryosurgery* may be especially useful in deep cystic lesions, but also helpful in any inflammatory papule or pustule. Increased vascular response plus local destruction may produce prompt absorption and clearing. It may be used in Cryostat® or by cotton-tipped applicator and liquid-nitrogen.

5. *Intra-lesional injections,* usually a steroid mixed with solution of antibiotic such as Lincocin® is remarkable in its ability to promptly cause an acute cystic or pustular lesion, which is large and painful, to subside in hours. The solution should be used as soon as the lesions appear to persist and enlarge. Equal parts of steroid-injectable and lincomycin makes a well tolerated mixture, but should be aqueous solutions, not repository.

6. *X-ray therapy,* while little used in comparison to 10-15 years ago, is still a good method of treating *intractable* acne, especially the severe scarring type that may leave so much residual scar and psychic trauma. Modern equipment fully enclosed, regular calibration, complete shielding except for treated areas, and understanding of skin type and dosage, may result in grateful patients otherwise doomed to long-term anxiety and depression. Since 1930 all larger medical centers have taught proper use of x-irridation, and untoward results are rare indeed. With the addition of isotretinoin (Accutane®) x-ray is not often used.

7. *Dermabrasion* is therapy ''after the fact''; it is fine for many scarred patients, but not for unstable individuals. It requires skill and experience to select the patients to be so treated, and long interviews with patients is highly desirable for accepting such an assignment. Results vary, both in the mind of the patient and the physician.

8. *13-Cis-retinoin* the most recent acne treatment addition, is limited in its use to severe cystic acne that has not responded to routine treatment. Adverse effects are extreme mucous membrane dryness and serum changes, especially increased triglycerides. These are tolerable with frequent observation and symptomatic care. Hair thinning and light sensitiveness occurs.

9. *PUVA,* long-wave ultra violet light above 33nm is also helpful in some acne conditions. Again the limitations and time devoted to its study are indicative of its effectiveness, but completed studies are as yet few. It may be a long time before A-wave-length therapy will be on the ''approved'' list except for desquamative diseases, such as psoriasis.

Summary

There are many old and new physical means of acne therapy, the popularity of which ebbs and flows depending on individual success or failure in the hands of one physician or another. The value of each modality is linked to the physician's familiarity and skill with the means employed, his rapport with patients and patients' families, and to the enthusiasm with which he uses his therapy. It cannot be forgotten that there is a ''placebo-effect'' in easily-influenced young patients, but it is rather the long-term benefits with which one can judge the effectiveness of any treatment means in such a very chronic disease as is acne vulgaris. There is little doubt that every concerned effort on the part of the physician to clear a young person's acne will be repaid handsomely. ⊡

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Pain—triggering anxiety—which accentuates the perception of pain...together they're worse than either alone. And since they're usually both present in musculoskeletal disorders, the best therapy is often a combination of analgesic and anxiolytic agents. Equagesic®-M combines the pain relief of aspirin with the tension-reducing properties of meprobamate—because together they're better than either alone.

See important information on next page.

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tablets

Equagesic®-M

(meprobamate with aspirin) ℗ Wyeth

Effective analgesic/anxiolytic alliance





Prompt, effective relief from the dual burden of pain and anxiety

tablets

Equagesic®-M

(meprobamate with aspirin) ℗ Wyeth

Effective analgesic/anxiolytic alliance

Proven superior to aspirin alone in controlled clinical trials

(BRIEF SUMMARY)

DESCRIPTION: Each tablet contains 200 mg meprobamate and 325 mg aspirin.

INDICATIONS: Adjunct in short-term treotment of pain accompanied by tension and/or anxiety in patients with musculoskeletal disease. Clinical trials demanstrated in these situations relief of pain is somewhat greater than with aspirin alone. Effectiveness in long-term use, i.e. over 4 months, has not been assessed by systemotic clinical studies. Physicians should periodically reassess usefulness of drug for individual patients.

CONTRAINDICATIONS: ASPIRIN: Allergic or idiosyncratic reactions to aspirin or related compounds. MEPROBAMATE: Acute intermittent porphyria; allergic or idiosyncrotic reactions to meprobamate or related compounds, e.g. carisoprodol, mebutamate, or carbromal.

WARNINGS: ASPIRIN: Use salicylates with extreme coution in patients with peptic ulcer, asthma, coagulation abnormolities, hypoprothrombinemia, vitamin K deficiency, or those on anticoagulants. In rare instonces, aspirin in persons allergic to salicylates may result in life-threatening allergic episodes.

MEPROBAMATE: DRUG DEPENDENCE: Physical and psychological dependence, and abuse have occurred.

Chronic intoxication from prolonged ingestion of, usually, greater than recommended doses is manifested by ataxia, slurred speech, and vertigo, Therefore, carefully supervise dose and amounts prescribed and avoid prolonged use, especially in alcoholics and others with known propensity for taking excessive quantities of drugs. Sudden withdrawal ofter prolonged and excessive use may precipitate recurrence of preexisting symptoms, e.g. anxiety, anorexia, or insomnia, or withdrawal reactions, e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and, rarely, convulsive seizures. Such seizures are more likely in persons with CNS damage or preexistent or latent convulsive disorders. Onset of withdrawal symptoms occurs usually within 12 to 48 hours after discontinuation; symptoms usually cease within next 12-to-48-hour period. When excessive dosage has continued for weeks or months, reduce dosage gradually over 1 to 2 weeks rather than stop abruptly. Alternatively, a short-acting barbiturate may be substituted, then gradually withdrawn.

POTENTIALLY HAZARDOUS TASKS: Warn patients meprobamate may impair mental or physical abilities required for potentially hazordous tasks, e.g., driving or operating machinery.

ADDITIVE EFFECTS: Since CNS-suppressant effects of meprobamate and alcohol or meprobamate and other psychotropic drugs may be additive, exercise caution with patients taking more than one of these agents simultaneously.

USAGE IN PREGNANCY AND LACTATION: An increased risk of congenital malformations associated with minor tranquilizers (meprobamate, chlordiazepaxide, and diazepam) during first trimester of pregnancy, has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. The possibility that a woman of childbearing potential may be pregnant at time of institution of therapy should be considered. Advise patients if they become pregnant during therapy or intend to became pregnant to communicate with their physicians about desirability of discontinuing the drug.

Meprobamate passes the placental barrier. It is present both in umbilical-cord blood at or near maternal plasma levels and in breast milk of lactating mothers at concentrations two to four times that of maternal plasma. When use of meprobamate is contemplated in breastfeeding patients, consider the drug's higher concentrations in breast milk as compared to maternal plasma levels.

USAGE IN CHILDREN: Keep preparations with aspirin out of reach of children. Equagesic®-M is not recommended for patients 12 years of age and under.

PRECAUTIONS: ASPIRIN: Salicylates antagonize uricosuric activity of probenecid ond sulfinpyrazone. Salicylates are reported to enhance hypoglycemic effect of sulfonylurea antidiabetics.

MEPROBAMATE: Use lowest effective dose, particularly in elderly and/or debilitated, to preclude over-sedation. Meprobamate is metabolized in the liver and excreted by the kidney; to avoid excess accumulation exercise caution in its use in potients with compromised liver or kidney function. Meprobamate occasionally may precipitate seizures in epileptic patients. It should be prescribed cautiously ond in smoll quantities to patients with suicidal tendencies.

ADVERSE REACTIONS: ASPIRIN: May cause epigastric discomfort, nausea, and vomiting. Hypersensitivity reactions, including urticaria, angioneurotic edema, purpura, osthma, and anaphylaxis may rarely occur. Patients receiving large doses of salicylates may develop tinnitus.

MEPROBAMATE: CNS: Drowsiness, otaxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impairment of visual occommodation, euphorio, overstimulation, paradoxical excitement, fast EEG activity.

GI: Nausea, vomiting, diarrhea.

CARDIOVASCULAR: Palpitation, tachycardia, various forms of arrhythmia, transient ECG changes, syncope, hypotensive crisis.

ALLERGIC OR IDIOSYNCRATIC: Milder reactions are characterized by itchy, urticarial, ar erythematous maculopapular rash, generalized ar confined to the groin. Other reactions include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, easinophilia, peripheral edema, adenopathy, fever, fixed drug eruption with cross-reaction to carisoprodol, and cross-sensitivity between meprobamate/mebutamate and meprobamate/carbromal. Rare, more severe hypersensitivity reactions include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, and anuria. Also, anaphylaxis, exfoliative dermatitis, stomatitis, and proctitis. Stevens-Johnson syndrome and bullous dermatitis have occurred.

HEMATOLOGIC (SEE ALSO "ALLERGIC OR IDIOSYNCRATIC"): Agranulocytosis, aplastic anemia have been reported, although no causal relationship has been established, and thrombocytopenic purpura.

OTHER. Exacerbation of porphyric symptoms.

DOSAGE AND ADMINISTRATION: Usual dase is one or two tablets, 3 to 4 times daily as needed for relief of pain when tension or anxiety is present. Not recommended for patients 12 years of age and under.

OVERDOSAGE: Treatment is essentially symptamatic and supportive. Any drug remaining in the stomach should be removed. Induction of vomiting or gastric lavage may be indicated. Activoted charcoal may reduce absorption of both ospirin and meprobamate. Aspirin overdasage produces usual symptoms and signs of salicylote intoxication. Observation and treatment should include manogement of hyperthermia, specific parenteral electrolyte therapy for ketoacidosis and dehydration, watching for evidence of hemorrhagic manifestations due to hypoprothrombinemia which, if it occurs, usually requires whole-blood transfusions. Suicidal attempts with meprobamate have resulted in drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Some suicidal attempts have been fatal. The following data, reported in the literature and from other sources, are not expected to correlate with each case (considering factors such as individual susceptibility and length of time from ingestian to treatment), but represent usual ranges reparted. Acute simple overdose (meprobamate alone): Death has been reported with ingestion of as little as 12 gram meprobamate and survival with as much as 40 gram.

BLOOD LEVELS:

0.5-2.0 mg percent represents usual blood-level range after therapeutic doses. The level may occasionally be as high as 3.0 mg percent.

3-10 mg percent usually corresponds to findings of mild-to-moderate symptoms of overdosage, such as stupor or light coma.

10-20 mg percent usually corresponds to deeper coma, requiring more intensive treatment. Some fatalities occur.

At levels greater than 20 mg percent, more fatalities than survivals can be expected.

Acute combined overdose (meprobamate with other psychotropic drugs or alcohol): Since effects can be additive, history of ingestion of a low dose of meprobamate plus any of these compounds (or of a relatively low blood or tissue level) cannot be used as a prognostic indicator.

In cases of excessive doses, sleep ensues rapidly and blood pressure, pulse, and respiratory rates are reduced to basal levels. Any drug remaining in stomach should be removed and symptomatic treatment given. Should respiration or blood pressure become compromised, respiratory assistance, CNS stimulants, and pressor agents should be administered cautiously as indicated. Diuresis, osmotic (mannitol) diuresis, peritoneal dialysis, ond hemodialysis have been used successfully in removing both aspirin and meprobamate. Alkalinization of the urine increases excretion of salicylates. Careful monitoring of urinary output is necessary, and cautian should be taken to avoid overhydration.

Relapse and death, after initial recovery, have been attributed to incomplete gastric emptying and delayed absorption.

HOW SUPPLIED: Bottles of 50 scored tablets

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Increased Trends of Prostate Operations in Alabama

Cecil Morgan, Jr., M.D.*
Sheila Spruell, ART†

Introduction

Alabama urologists have not been generally aware that the in-state incidence of prostatectomy is significantly greater than national averages. Through the routine reporting mechanisms of Alabama Medical Review (AMR), the statewide Professional Standards Review Organization, data was sent to the Human Health Services (HHS).

In August 1980, the HHS sent a memorandum to AMR indicating that data analysis showed that prostatectomy rates for Alabama were twenty per cent (20%) above the national average.

The HHS asked AMR to make an indepth analysis of this apparent discrepancy. AMR developed an impact objective to identify the origin of the increase in Alabama, the accuracy of the statistics, and Quality Assurance Study to determine the necessity of surgery. The latter addressed a HHS National priority #3 which was to reduce unnecessary surgery.

Before analysis of the data, its accuracy had to be determined. This was done by obtaining the medical record number of all prostatectomies in AMR's data bank and sending those numbers back to the originating hospitals for confirmation of case totals and surgeon identifiers. The few errors that were found were corrected by the medical record department in each hospital. These resulting data were felt to be as accurate as could be achieved. Raw data is presented in Table I. These data were then analyzed as a per cent of change as presented in Table II. During the study period of 1977-1980 there was a thirty-one per cent (31%) increase in the total number of prostatectomies. This included an increase (25%) of the diagnosis BPH and a remarkable increase (62%) of prostate operations for carcinoma of the prostate. During this time there was only a 7.1% increase in male enrollees in the federal

TABLE I
ALABAMA MEDICARE PROSTATECTOMY STUDY DATA

	1977	1978	1979	1980
Total Prostatectomy	2,633	3,274	3,376	3,468
Total Surgery for BPH	2,118	2,612	2,631	2,636
Total Surgery for CA of Prostate	515	662	745	832
Total Urologists in Alabama[1]	104	108	111	105
Licensed Bed Capacity	19,240	19,551	19,881	20,420
Total Medicare Male Enrollees[2]	155,247	158,889	162,725	166,596
Total Black Male Medicare Enrollees	27,006	27,418	27,761	28,209
Total White Male Medicare Enrollees	113,691	116,856	120,061	123,413

[1]State Health Planning Development Agency, Montgomery, Alabama
[2]Division of Health Care Finance Administration, Baltimore, Maryland

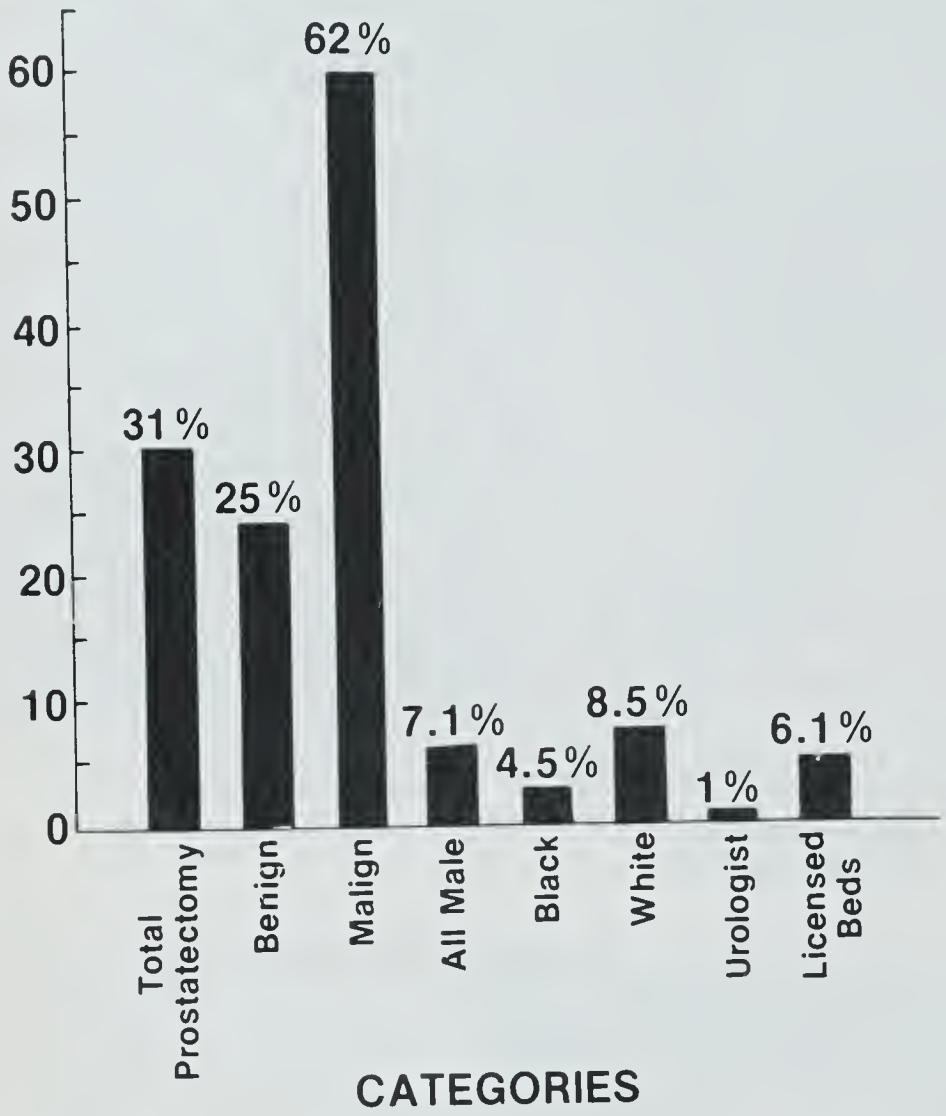
* Past President, AMR, Board of Directors; Chairman, AMR Profile Analysis Committee.
† Director of Data, AMR.

programs analyzed. Of this increase in male enrollees in the federally funded programs, only 4.5% were blacks and 8.5% whites. Also, during this period in Alabama, the licensed beds increased only 6.1% and there was no significant change in the number of urologists in the State.

PROSTATECTOMY STUDY

TABLE II

Percent of Change of Categories from 1977-1980



The Quality Assurance Committee drew a statistically significant ten per cent sample from the hospitals reporting the highest incidence of prostatic surgery. Only three of the 719 records reviewed did not meet criteria established by urologists who are members of the AMR Quality Review Study Committee. Seventy-seven per cent (77%) of the sample records indicated a diagnosis of BPH, and twenty-three per cent (23%) had the diagnosis cancer of the prostate. Incidentally, in forty-two per cent (42%) of these latter patients, the diagnosis of cancer was made pre-operatively.

Discussion

In response to HHS, our data was compared to the U.S. totals during the study period as presented in Tables III, IV and V. From these tables it can be seen that the percentage rate of prostatectomy for BPH in the study years was actually less than the national averages. Percentage rate of prostatic cancer in Alabama was clearly more than U.S. percentage in each of the study years.

Using these data with the results from the Quality Review Study it can be seen that prostate operations

TABLE III

PROSTATECTOMY

	Number	Total/1,000 Enrollees
1977		
Alabama	2,633	17/1,000
U.S.	44,752	4.2/1,000
1978		
Alabama	3,274	21/1,000
U.S.	71,326	6.7/1,000
1979		
Alabama	3,376	21/1,000
U.S.	95,652	9.0/1,000
1980		
Alabama	3,468	21/1,000
U.S.	N/A	N/A

from BPH was not associated with any unnecessary or increased incidence of surgery. Conversely, the differences between prostate surgery figures for AMR and those for the U.S. appearing to reflect overall increase in numbers of prostate operations in Alabama, are

TABLE IV

PROSTATECTOMY

	BPH	
	Number	Percent
1977		
Alabama	2,118	80%
U.S.	36,865	82%
1978		
Alabama	2,612	79%
U.S.	58,423	82%
1979		
Alabama	2,631	77%
U.S.	77,554	81%
1980		
Alabama	2,636	76%
U.S.	N/A	N/A

apparently due to the increase in those operations done for cancer, because those for BPH remained essentially constant. In fact, between 1980 and 1981 the rate of increase of surgery was only 1% for whites and 9% for blacks as presented in Table VI.

TABLE V

PROSTATECTOMY

	CA of the Prostate	
	Number	Percent
1977		
Alabama	515	20%
U.S.	7,887	18%
1978		
Alabama	662	20%
U.S.	12,903	18%
1979		
Alabama	745	22%
U.S.	18,098	19%
1980		
Alabama	832	24%
U.S.	N/A	N/A

ALL FOR ONE
ONE FOR ALL



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Alexandre Dumas'
The Three Musketeers
and D'Artagnan

ONE FOR ALL – One tablet treats pinworm in any patient, regardless of age or body weight.* Obviates need to calculate individual dosages.

A single tablet eradicates pinworm in 95% of patients.

*Contraindicated in pregnant women and in persons who have shown hypersensitivity to the drug.

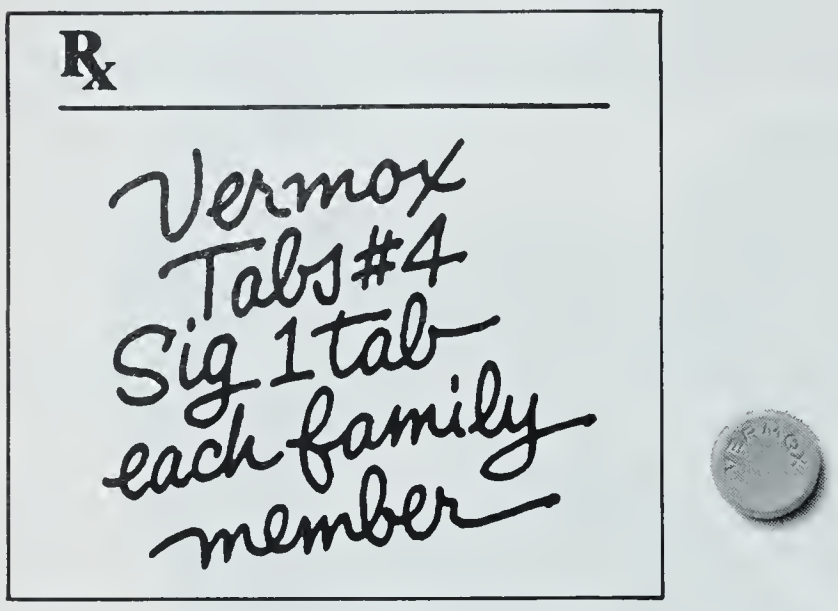
VERMOX® CHEWABLE TABLETS
(mebendazole)

JANSSEN PHARMACEUTICA

The #1 anthelmintic for pinworms and many other worm infestations

Please see complete Prescribing Information on adjacent page.

VERMOX® CHEWABLE TABLETS (mebendazole)



DESCRIPTION VERMOX (mebendazole) is methyl 5-benzoylbenzimidazole-2-carbamate.

ACTIONS VERMOX exerts its anthelmintic effect by blocking glucose uptake by the susceptible helminths, thereby depleting the energy level until it becomes inadequate for survival. In man, approximately 2% of administered mebendazole is excreted in urine as unchanged drug or a primary metabolite. Following administration of 100 mg of mebendazole twice daily for three consecutive days, plasma levels of mebendazole and its primary metabolite, the 2-amine, never exceeded 0.03 μg/ml and 0.09 μg/ml, respectively.

INDICATIONS VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (common roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies as a function of such factors as pre-existing diarrhea and gastrointestinal transit time, degree of infection and helminth strains. Efficacy rates derived from various studies are shown in the table below:

	Whipworm	Common Roundworm	Hookworm	Pinworm
cure rates				
mean	68%	98%	96%	95%
(range)	(61-75%)	(91-100%)	—	(90-100%)
egg reduction				
mean	93%	99.7%	99.9%	—
(range)	(70-99%)	(99.5%-100%)	—	—

CONTRAINDICATIONS VERMOX is contraindicated in pregnant women (see Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

PRECAUTIONS *PREGNANCY:* VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

PEDIATRIC USE: The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

ADVERSE REACTIONS Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

DOSAGE AND ADMINISTRATION The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food. For the control of pinworm (enterobiasis), a single tablet is administered orally, one time. For the control of common roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days. If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

HOW SUPPLIED VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets.
VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium.

US Patent 3,657,267
December 1979

Committed to research...
because so much remains to be done.

Tableted by Janssen Pharmaceutica, Beerse, Belgium for

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JPI-282

It was beyond the present scope of AMR to institute an epidemiological program to determine the reasons for the increase in cancer of the prostate in this area. However, a possible explanation for this apparent increase is given in an article, ''Cohort Mortality for Prostatic Cancer Among United States Non Whites.'' The authors noted that carcinoma of the prostate has become the most common cancer in black males and

TABLE VI

PROSTATE OPERATIONS FOR MALIGNANCY

	1980	1981	% Change
White	577	585	+1
Black	255	278	+9
Total	832	863	+4

there is a higher occurrence in this group than in white males in the U.S. The age adjusted rates have increased for black males while remaining about constant for whites.

They postulated that age adjusted rates mask underlying patterns within a particular age group. A generational effect was demonstrated for the increase in non-white rates and no generational effect could be found for white age groups. Graphically they examined non-white prostatic cancer mortality rates among men 45 to 84 years for eight separate birth cohorts beginning in 1846 through 1925.

The rates peaked in the birth cohorts of 1896 to 1900 and cohorts at that time showed increased rates for all age groups. After 1896-1900 there was a fairly consistent decline in the mortality rates. The effect was amply supported by statistical analysis. They concluded that if trends in younger non-white age groups continue and the effects of older ones fade, the overall mortality rates for prostate cancer in blacks will be reduced.

Conclusion

From this evaluation we determined that the prostatectomy was not increased on the basis of unnecessary surgery but on the basis of increased surgery for cancer of the prostate and that this incidence was not based on a significant increase in the number of patients nor to a change in the number of urologists in the state.

Because of the cohort mortality study of prostate cancer, there may be some reason to anticipate that the percentage rates of surgery for cancer of the prostate will decrease in the future. This mandates yearly AMR study of new data and the epidemiological implication of these findings. ⊡

Prostatic 125_I Implantation — New Approach in the Management of Prostatic Cancer

Robert Y. Kim, M.D.*
Anton J. Bueschen, M.D.†

Cancer of the prostate is the second most common cancer among American men today. Yet there is still much controversy surrounding the efficacy of the therapeutic modalities currently available for prostatic cancer. By accepted criteria, only 5-10% of the patients with the diagnosis of prostatic cancer are eligible for radical prostatectomy.[1] Sixty percent of patients with prostate cancer have either Stage B_2 or C disease at the time of diagnosis and this large group of patients is eligible for radiotherapy. Bagshaw et al, Del Regato and others using super voltage beam treatment have demonstrated that radiation therapy is capable of curing prostate cancer. More recently, permanent interstitial implantation has been renewed with growing interest because of lesser morbidity in terms of urinary and sexual dysfunction and equal local control. Recently, 125_I permanent implantation with bilateral pelvic lymphadenectomy has been used in selected patients at the University of Alabama in Birmingham. The purpose of this presentation is to introduce this relatively new approach of radiation treatment in the management of prostatic cancer.

* Assistant Professor, Department of Radiation Oncology.
† Professor and Director, Division of Urology.
University of Alabama in Birmingham, 619 South 19th Street, Birmingham, Alabama 35233. (205) 934-2760.

Technique

The actual 125_I implant procedure is a team effort, requiring close cooperation between the urologist and radiation oncologist. Technique of 125_I implantation has been developed at the Memorial Sloan-Kettering Cancer Center in New York. A lower abdominal approach is used to perform pelvic node dissection and exposure of the prostate gland. An O'Connor rectal sheath is necessary so that a finger can be passed in a sterile manner into the rectum during the prostatic implant. The implant technique follows this sequence.

1. After completion of the pelvic lymph node dissection, the anterior and lateral aspects of the prostatic capsule are exposed.
2. The radiation oncologist measures the prostate, calculating the number of 125_I seeds needed and their spacing throughout the gland by a dimension averaging method.[2]
3. Seventeen-gauge needles are inserted into the prostate, usually about one centimeter apart until their points can be palpated by an examining finger in the rectum. Care is taken to avoid the lumen of the prostatic urethra by avoiding penetration of the urethral catheter with a needle (Fig. 1).

Pinworms work the night shift



Artist's interpretation:
The nocturnal egg-laying of the female pinworm causes acute perianal itch...making children shift sleeplessly through the night.

Put pinworms out of work...

Promptly paralyzes pinworms and roundworms

Antiminth® (pyrantel pamoate) has a unique, rapid immobilizing effect on worms. Unlike mebendazole, which blocks glucose uptake—slowly "starving" helminths to death—Antiminth quickly acts on the neuromuscular junction to promptly paralyze parasites.

97% efficacy with a single dose

A single dose of Antiminth delivers rapid clinical and parasitological cures, "Single doses... showed high overall efficacy against *Enterobius vermicularis* (97.2%) and *Ascaris lumbricoides* (97.5%)."[1]

Simple, well tolerated therapy

Antiminth offers ease of administration and patient tolerance. "...when compared to the other single dose agents available, [Antiminth] has the advantage of being non-staining and may be better tolerated."[2]

The dosage form children like

Antiminth is available as a pleasant tasting, caramel-flavored oral suspension. Effective in just



one dose against pinworm and roundworm—in both children and adults—Antiminth is easy-to-administer and easy-to-take.

Respected around-the-world

In some parts of the world, large populations are afflicted with helminthic infections. Physicians in endemic areas have become experts on parasitic diseases—and have come to rely on Antiminth for the rapid cure of infestations. Antiminth is recommended as an agent of first choice for pinworm and roundworm by leading medical authorities.[3]

Warnings

Usage in Pregnancy Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions

Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions

The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration

Children and Adults Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

References 1. Pitts NE, Migliardi JR: *Clinical Pediatrics* 13:87, 1974. **2.** Modell W: *Drugs of Choice* 1980-1981. C. V. Mosby Co., St. Louis, 1980, p. 362. **3.** Goodman LS, Gilman A: *The Pharmacologic Basis of Therapeutics*, 6th edition, MacMillan Publishing Co., Inc., New York, 1980, p. 1032.

Pfizer

Pfipharmecs Division

Pfizer Inc. New York, N.Y. 10017

Prescribe Antiminth® Suspension

50 mg pyrantel base/ml

(pyrantel pamoate)

Cures pinworm and roundworm fast...with a single dose

4. An applicator (inserter) is attached to each needle sequentially.

5. 125_I seeds are implanted into the prostate through the needles by depressing the stylet on the applicator. Before implanting the first seed of each needle, the needle is pulled back a distance equal to the length of each seed (0.5 cm.).

6. The needle is retracted one half or one centimeter increments with the ejection of each seed until the needle is completely withdrawn from the prostate.

A pelvic x-ray is taken for localization of the seeds and dosimetry a few days post-implantation (Fig 2).

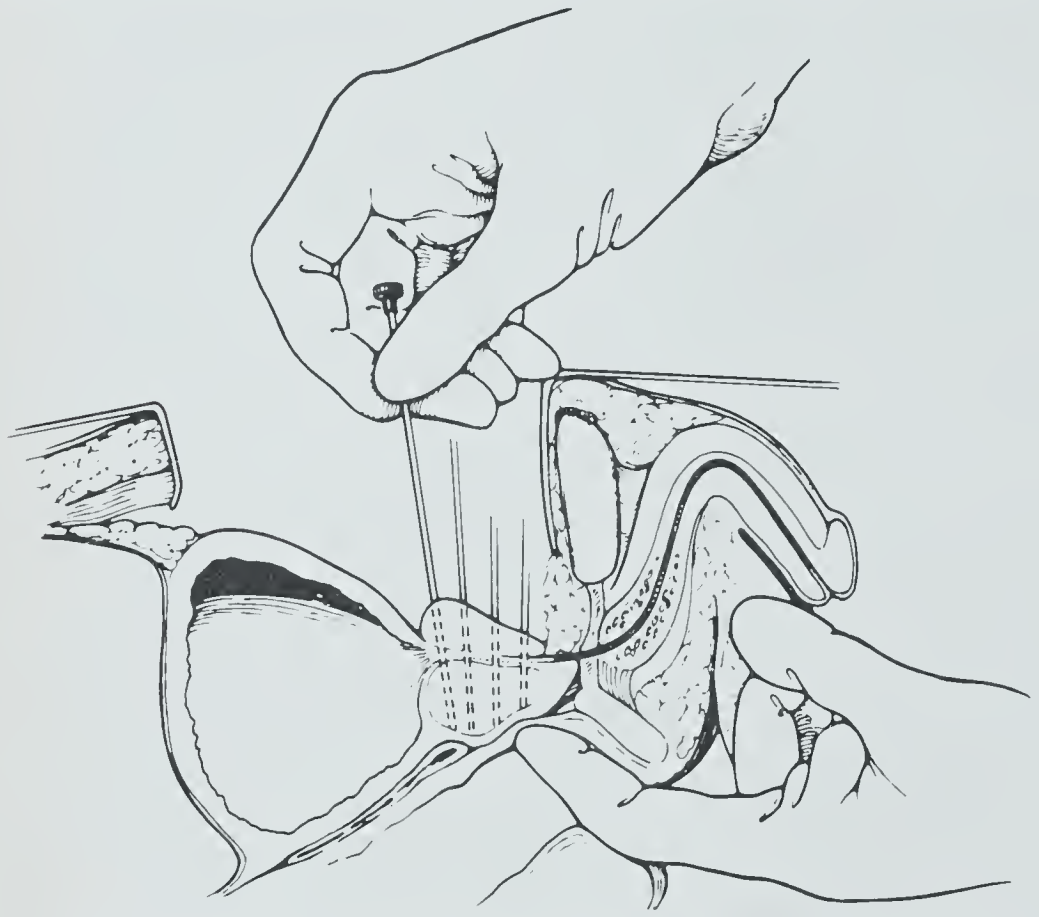


Figure 1. Prostate 125_I implant. Regularly spaced hollow stainless steel needles into both prostatic lobes.

Patient Eligibility

Patients are selected on the basis of the following criteria.

(1) Good general health with life expectancy of at least five years.

(2) Histologic confirmation of prostatic carcinoma.

(3) Tumor limited to the prostate or the immediate para-prostatic tissue (Stage A_2, B, and early C).

(4) No evidence of distant metastasis by clinical, biochemical, roentgenographic and radionuclear studies.

Discussion

The treatment of prostatic cancer began in 1910 with intraurethral radium introducing an early period of interstitial irradiation. This was replaced by radical prostatectomy as the treatment of choice for small tumors and hormone therapy for more advanced tumors. Later these followed an era of orthovoltage radiation treatment directed largely toward palliation of advanced disease, which gave way to the introduction of intensive megavoltage irradiation as a curative approach. More recently, interstitial irradiation has been renewed

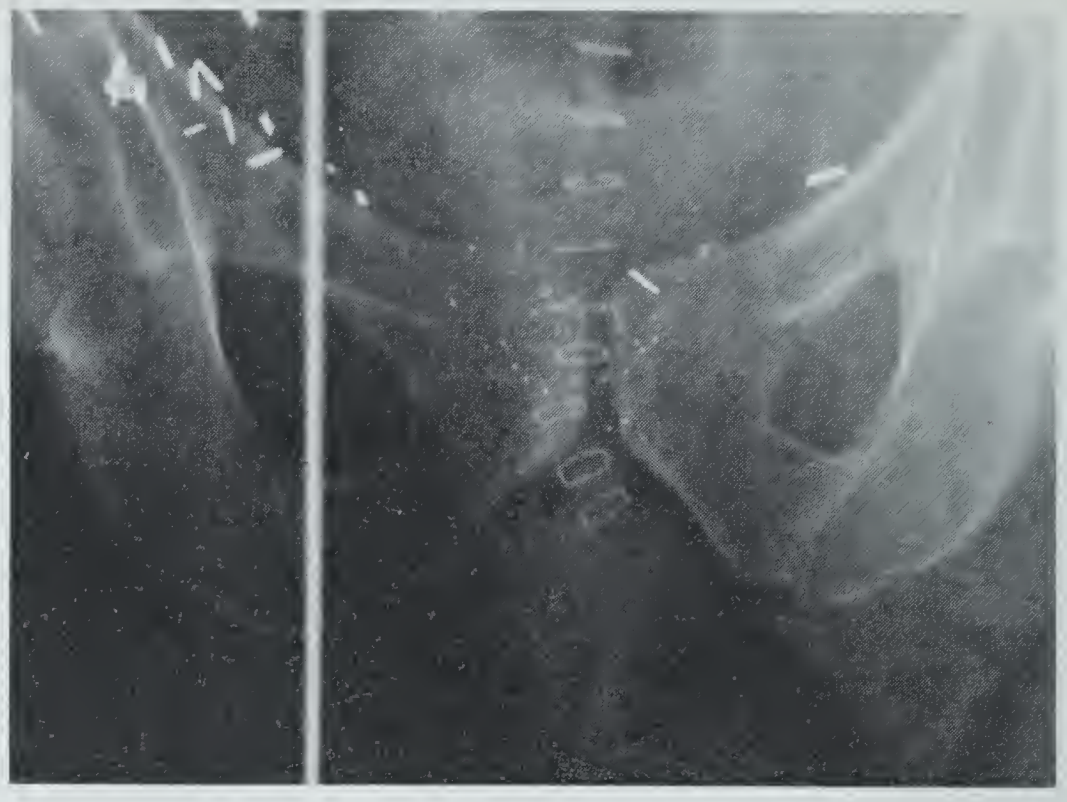


Figure 2. Anteroposterior pelvic roentgenogram after 125_I implantation. Radiographic gold markers at the center of seed are seen.

with interest as permanent implants. Interstitial irradiation provides a special value for curative radiation treatment. This technique permits the irradiation of localized tumors with much higher doses than can be given safely by external radiation treatment.

Cancer of the prostate may disseminate by vascular and/or lymphatic routes, and its potential curability warrants ablation of the primary tumor and its lymphatic extension after exclusion of patients with hematogenous metastasis. 125_I seed implantation of the prostate after surgical staging with bilateral pelvic lymphadenectomy is a logical therapeutic alternative in attempting ablation or control of the primary tumor by relatively high radiation doses.

Several radionuclides have been used in the past. Artificial radionuclides, such as 198_{Au} and 192_{Ir} have certain practical advantages when compared with 226_{Ra} and 222_{Rn}; they include greater availability, lower cost and easier protection. A major advance, however, has been the development of low energy 125_I seeds as a substitute for higher energy radionuclides (Table 1). The postulated advantages of 125_I are low dose rate, the continuous irradiation and a possible high relative biological effectiveness.[3]

At this time, there are no series in which the results of 125_I seed implant can be directly compared with the results of external irradiation and radical prostatectomy. However, local tumor control with 125_I seeds is comparable to that achieved by the other modalities. An average dose of 16,000 rads over one year gives an 80-90% local control of cancer with acceptable morbidity.[4] Clinical regression rate of prostate tumor has been extremely slow due to the relatively long half life of 125_I (60 days) and slow responding prostate tumor itself; a 25% reduction in the size of tumors occurred at the end of 6 months. Complete resolution in the responding patients occurred at 18 months. The percent local failure rate was inversely proportional to the minimum tumor dose delivered to the gland.

TABLE 1
RADIONUCLIDES FOR INTERSTITIAL IMPLANTS

Isotope	*Half Life (days)*	*Gamma Energy*	*Half Value Layer (lead)*	*Half Value Layer (tissue)*
125_I	60.0	27-35 keV	0.025 mm	2 cm
192_{Ir}	74.4	300-610 keV	4.5 mm	6 cm
198_{Au}	2.7	410 keV	4.5 mm	6 cm
222_{Rn}	3.8	50-2440 keV	13.0 mm	10 cm

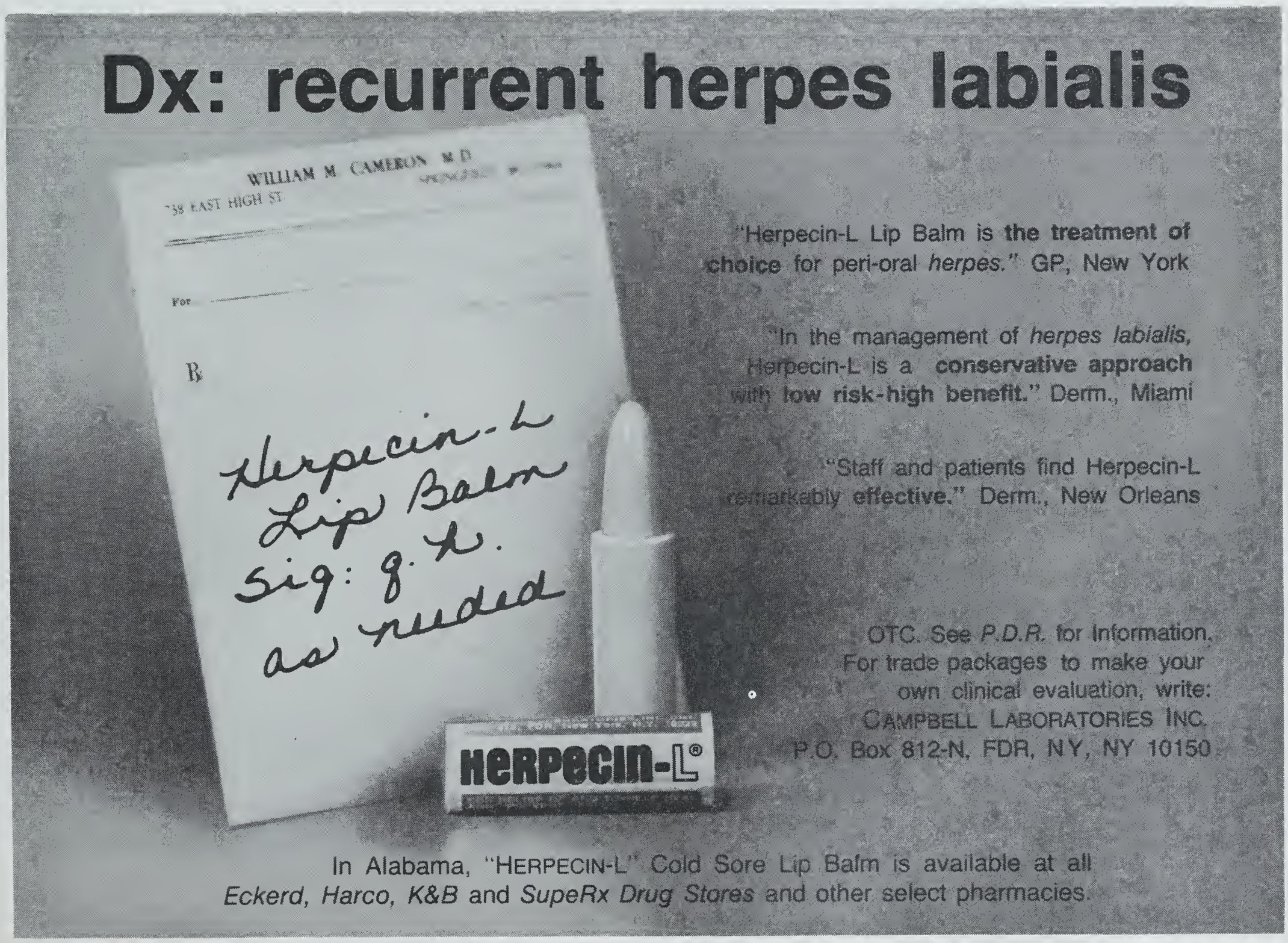
The complication of 125_I implantation and pelvic lymphadenectomy for prostatic cancer have been quite acceptable and less than that of radical prostatectomy. Radiation complication of 125_I implantation can be divided into acute and late complications. Acute intraoperative complication has been minimal blood loss from multiple perforations of the prostate by the needles used to implant the radioactive seeds. Late complications have been minor and transient, mostly manifesting as irritative symptoms related to the bladder and rectum. Very rare recto-urinary fistula have been reported. The impotence rate has been reported to be 7-15% compared to about 40-50% with external irradiation and 90-100% with radical prostatectomy.[5] Urinary incontinence does not occur from interstitial irradiation.

Summary

Interstitial implantation with 125_I seeds offers the physician a valuable alternative in the treatment of early prostatic tumors. When compared to radical prostectomy and external beam radiation, 125_I seeds offer several significant advantages in treatment of early localized prostatic cancer, particularly in those cases where the patients retention of sexual and urinary function is a major concern. Additionally, preliminary results support that survival may be equal with the three forms of therapy in localized carcinoma of the prostate.

Reference

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Diagnosis and Treatment of Syphilis

Paul I. Liu, M.D.*
Abbey Strauss, M.D.

Introduction

Syphilis is a complex systemic illness caused by the spirochete *Treponema pallidum*. Primary syphilis occurs following penetration of the spirochetes through the mucous membranes or abraded skin surface causing painless skin papule (chancre) associated with regional lymphadenopathy. The incubation period lasts about three weeks. It may be acquired by sexual contact, by passage through the placenta, by kissing or by transfusion of fresh blood, however, the overwhelming majority of cases of syphilis are transmitted venerally. Untreated primary syphilis progresses to secondary syphilis. Approximately three months after exposure (approximately six weeks after healing of the chancre) generalized mucocutaneous lesions and lymphadenopathy appear and the treponemas are found in many tissues and fluids. The rash disappears in 2-6 weeks and 40-50% of untreated cases progress to a latent stage. The latent stage is diagnosed serologically and by history. In a small number of patients, a late or tertiary syphilis characterized by progressive disease involving primarily the ascending aorta and/or the central nervous system, but practically any organ in the body may be involved.[1]

The serologic test commonly used for the diagnosis of syphilis has been shown not to be as reliable and accurate as once thought. Since high false-positive and false-negative rates have been reported in both the general and specific populations,[2] the possibility of a diagnostic error must always be considered.[3] In this light, practical guidelines by which to work-up patients suspected of having syphilis are illustrated as follows.

Serologic test for the diagnosis of syphilis are summarized in Table 1. In the past several years, the VDRL (Veneral Disease Research Laboratory) has slowly been replaced by the RPR (Rapid Plasma Reagin) test. The RPR is less costly and easier to do than the VDRL. The FTA-ABS (Fluorescent Treponemal Antibody-Absorbed) method is being replaced by the MHA-TP (Microhemaglutination Treponemal Pallidum) test. It too is easier to do and less expensive. In general practice, the RPR may be considered equivalent to the VDRL and the MHA-TP equivalent to the FTA-ABS.

Diagnosis of Syphilis

Figure 1 and Figure 2 are flow sheets of the various problems and decisions which arise during the work-up of a patient with suspected syphilis.

Interpreting serological test results must always be done within the framework of the physical examination and sexual history. Syphilis is a disease of many characteristics, some of which are very subtle. When in doubt a Darkfield Examination is always diagnostic, but if this is impossible, then serial laboratory tests, careful histories and careful physical examinations may be the only methods available by which to identify the disease. Some physicians will treat without definite laboratory or clinical evidence of syphilis if they fear losing contact with the patient or are dealing with a

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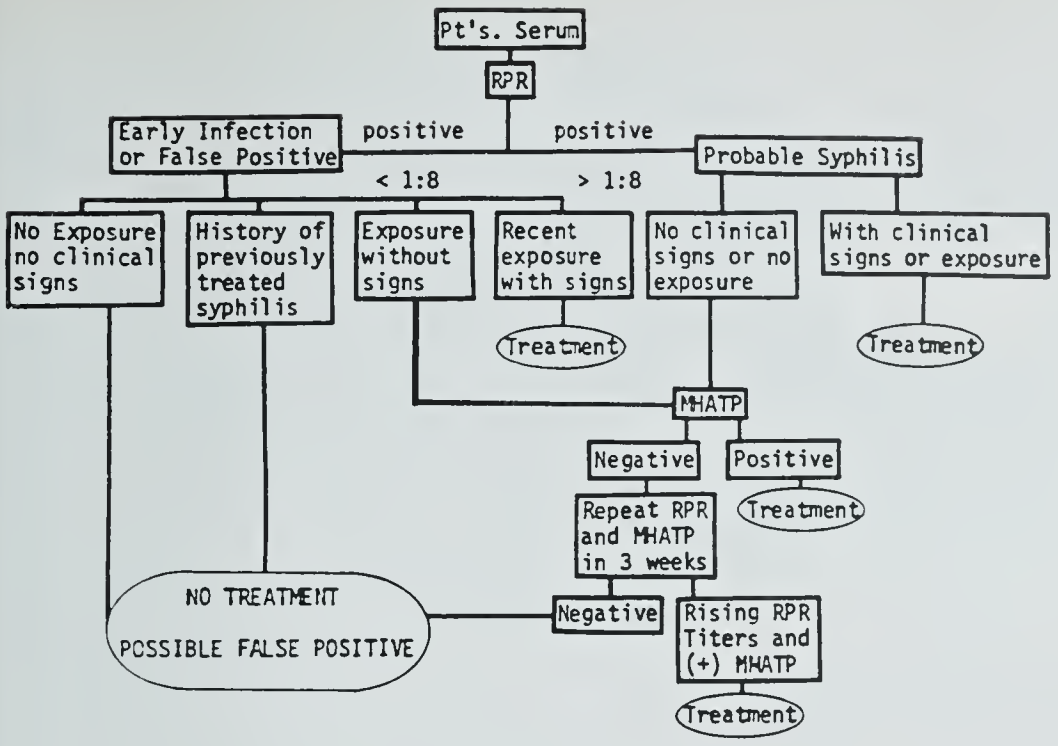


Figure 1

highly suspected case in a high risk patient. This is especially so in pregnant patients and neonates.

False Negatives and False Positives

False positives and false negatives occur because the different serologic tests measure different biologic by-products of syphilis and titers of these by-products rise, fall, and persist at different rates. Treponemal anti-

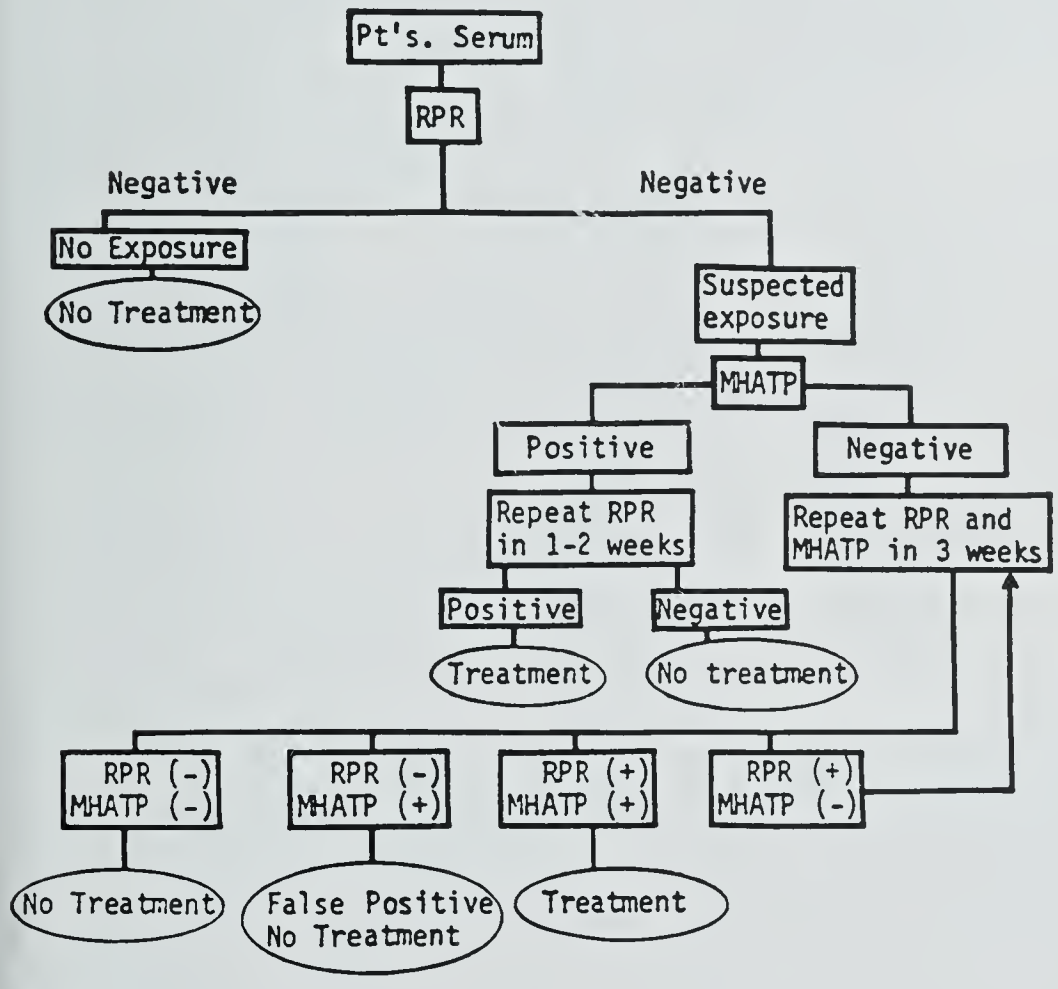


Figure 2

bodies arise more slowly than the non-specific reagin antibodies. After treatment, the nonspecific reagins disappear more quickly. Reagins also disappear in untreated late syphilis, but the treponemal antibodies remain. Knowing the chronology of the disease process is crucial to its accurate diagnosis.

Generally, false-negative RPRs occur when the patient is at the very early stages of infection (less than 7 days since exposure) or in the very late stages of the disease. False-negative RPRs also occur in patients with previously treated syphilis in whom only sub-

Table 1
SEROLOGIC TESTS FOR SYPHILIS

A. Screening Tests
1. **RPR and VDRL (Non-specific Reagin Tests)**
 Not positive until 7 to 10 days after the chancre appears. High false-negative rates reported. Prozone reaction gives false negative in 1 to 2 percent of secondary syphilis cases. VDRL on CSF considered diagnostic if positive. Positive results require MHA-TP or FTA-ABS for confirmation.

B. Confirmatory Tests
1. **FTA-ABS (Specific Treponemal Test)**
 Costly, yet very sensitive and specific. False negative up to 18% of primary syphilis. Not suggested for cerebrospinal fluid. May be false positive in 1 to 2 percent of general population. May be positive for years after successful treatment.
2. **MHA-TP (Specific Treponemal Test)**
 Less expensive than FTA-ABS, as sensitive, but less specific. May be false-negative in up to 36% of early primary syphilis (if less than 3 weeks after infection). Overall, has fewer false-positives than FTA-ABS.

detectable reagin titers remain. RPR false-negatives are also seen in 1 to 2 percent of secondary syphilis if the patient's serum is not diluted before testing (''prozone reaction''). False negative MHP-TPs usually occur if the patient was infected less than three weeks before the test. Up to 25% of all false positives are due to technical error. False positives are also common in certain disease states (listed in Tables 2 and 3). In doubtful cases, a darkfield examination should be ordered. Several cluses to false-positives should be remembered: (A) chronic false-positives occur in 1 to 2 percent of the general population and in 10% of the general population over 80 years old; (B) acute false-positives rarely show RPR titers greater than 1:8; (C) a false-positive FTA-ABS is usually reported as borderline or with a beady, not smooth, fluorescent pattern; (D) most false positives are associated with concurrent hypergammaglobulinemias, infections, and autoimmune diseases. Narcotic addicts have a very high false-positive rate.[2]

TABLE 2
ACUTE FALSE POSITIVE

A. Serology reverts to normal in 6 months without antisyphilic treatment.
B. Titers Rarely Greater than 1:8.
C. Possible Causes for Acute False Positives:
1. **Acute viral, protozal or bacterial infections**
2. **Recent vaccinations**
3. **Allergic reactions**
4. **Hemolytic anemia**
5. **Pregnancy**
6. **Hypergammaglobulinemia or cryoglobulins**
7. **Narcotic addiction**
8. **Liver cirrhosis**

Managing False Positives

If, despite an adequate and normal work-up and treatment, the serologies remain positive, repeat the serologies in six months to differentiate an acute versus chronic false-positive. If the positive serologies persist, begin a work-up for the conditions listed in Table 2 and 3. These tests are suggested: blood cultures, ANA, RF, anti-DNA, LE, heterophile, serum electrophoresis, cryoglobulin levels, herpes genitalis titers, ASO titer, allergy workup, occult malignancy work-up, and evidence of alcohol or drug abuse. Do not forget to consider reinfections with syphilis concurrent with other conditions.

Treatment of Syphilis

Fortunately, syphilis is still very sensitive to penicillin. Table 4 outlines the currently recommended treatment protocol. Follow the treatment progress with serial RPR titers at 1, 2, and 6 months.

It needs to be kept in mind that Jarisch-Herxheimer reaction develops in over 50% of all patients treated for syphilis. It occurs 6 to 8 hours after antibiotic treatment is started. Usually mild, the signs are fever, chills, malaise, tachycardia, mild hypotension, and an increase in the intensity of the mucocutaneous lesions of secondary syphilis. Symptoms subside within a 24 hour period. Treatment is aspirin, fluid, and bedrest.

TABLE 3
CHRONIC FALSE-POSITIVES

A. Positive serology does not revert to normal in 6 months even with antisyphilic treatment.
B. False-positives or borderline FTA-ABS give beady, not smooth fluorescent patterns.
C. Possible causes for chronic false positives:
1. Malignancies
2. SLE and Discoid lupus
3. Connective tissue diseases
4. 10% of population over 80 years old and 1 to 2 percent of general population
5. Other untreated treponemal infection (yaws, pinta, bejel)
6. Autoimmune disorders
7. Use of methyldopa, hydralazine, or procainamide
8. Heroin addiction
9. History of treated syphilis
10. Alcoholic cirrhosis
11. Hypergammaglobulinemia and presence of cryoglobulins

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3. Criteria and Techniques for the Diagnosis of Early Syphilis. Center for Disease Control, PHS Publication, No. 98-376, 1979.
4. Recommended Treatment Schedules for Syphilis. Center for Disease Control, PHS Publication No. 98-478, 1976.

TABLE 4
TREATMENT (ADOPTED FROM CDC RECOMMENDATIONS)[4]

A. Primary, secondary, or latent stages of less than 1 year duration:
Benzathine penicillin G, 2.4 million units IM, once; if allergic to penicillin, tetracycline HCl 500 mg PO, QID x 15 days.
B. Late syphilis or symptomatic disease of more than 1 year duration cardiovascular symptoms or late benign syphilis:
1. **CSF is normal: Benzathine penicillin 2.4 million units IM weekly for 3 weeks or with penicillin intolerance, tetracycline HCl 500 mg PO, QID x 30 days.**
2. **CSF is abnormal — Neurosyphilis: Crystalline penicillin G, 2 to 4 million units, IV 14 for 10 days or procaine penicillin G, 600,000 units IM daily for 15 days. With penicillin intolerance, tetracycline HCl 500 mg PO, QID x 30 days may be used.**

C. Congenital Syphilis:
1. **Infants with abnormal CSF: Crystalline penicillin G, 50,000u/kg IM or IV for 10 days.**
2. **Infants with normal CSF: Benzathine penicillin G 50,000u/kg IM.**

D. Preventive Syphilis:
Preventive stage syphilis applies to seronegative people with no clinical signs of syphilis yet a positive history of the exposure within the past 3 months. Treat the same as primary syphilis.

In all types of syphilis, erythromycin or tetracycline may be substituted for penicillin. However, avoid the estolate form of erythromycin and all tetracyclines in pregnant (or potentially pregnant) women; tetracyclines should not be used in children under 12 years old.

Motrin®
ibuprofen, Upjohn
600 mg Tablets



More convenient for your patients

Upjohn

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J-9043-4 July 1981

Bactrim™ attacks the
(trimethoprim and sulfamethoxazole/Roche)
in acute exacerbations

Bactrim concentrates in serum and penetrates sputum[1-3]



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ROCHE

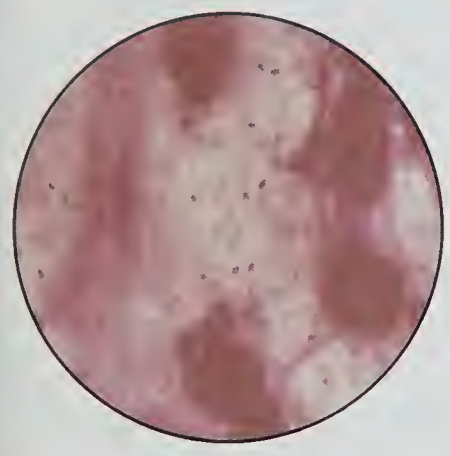
major pathogens of chronic bronchitis*

Bactrim clears sputum of susceptible bacteria

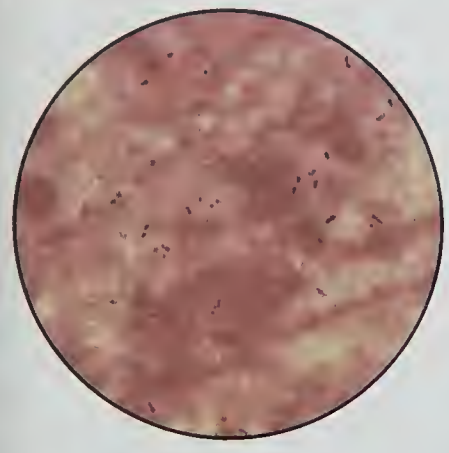
In sputum cultures from patients with acute exacerbations of chronic bronchitis, *H. influenzae* and *S. pneumoniae* are isolated more often than any other pathogens.[4,5] One study of transtracheal aspirates from 76 patients with acute exacerbations found that 80% of the isolates were of these two pathogens.[5]

Bactrim is effective *in vitro* against most strains of both *S. pneumoniae* and *H. influenzae*—even ampicillin-resistant strains. And in acute exacerbations of chronic bronchitis involving these two pathogens, sputum cultures taken seven days after a two-week course of therapy showed that Bactrim eradicated these bacteria in 91% (50 of 55) of the patients treated.[6]

attacks *H. influenzae*—even ampicillin-resistant strains



attacks *S. pneumoniae*



Bactrim reduces coughing and sputum production

In three double-blind comparisons with ampicillin *q.i.d.*, Bactrim DS proved equally effective on all clinical parameters.[7-9] Bactrim reduced the frequency and severity of coughing, reduced the amount of sputum produced and cleared the sputum of purulence.

Bactrim has the added advantages of *b.i.d.* dosage convenience and a lower incidence of diarrhea than with ampicillin, and it is useful in patients allergic to penicillins.

Bactrim also proved more effective than tetracyclines in 10 clinical trials involving nearly 700 patients.[10] Overall clinical condition of the patients, changes in sputum purulence, reduction in sputum volume and microbiological clearance of pathogens—all improved more with Bactrim therapy than with tetracyclines. G.I. side effects occurred in only 7% of patients treated with Bactrim compared with 12% of tetracycline-treated patients. (See Adverse Reactions in summary of product information on next page.)

Bactrim is contraindicated in pregnancy at term and nursing mothers, infants under two months of age, documented megaloblastic anemia due to folate deficiency and hypersensitivity.

Bactrim DS. For acute exacerbations of chronic bronchitis in adults* when it offers an advantage over single-agent antibacterials.

References: 1. Hughes DTD, Bye A, Hodder P: *Adv Antimicrob Antineoplastic Chemother I/2*:1105-1106, 1971. **2.** Jordan GW *et al: Can Med Assoc J 112*:91S-95S, Jun 14, 1975. **3.** Beck H, Pechere JC: *Prog Antimicrob Anticancer Chemother 1*:663-667, 1969. **4.** Quintiliani R: Microbiological and therapeutic considerations in exacerbations of chronic bronchitis, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts;* Princeton Junction, NJ, Communications Media for Education, Inc., 1980, pp. 9-12. **5.** Schreiner A *et al: Infection* 6(2):54-56, 1978. **6.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **7.** Chodosh S: Treatment of acute exacerbations of chronic bronchitis: results of a double-blind crossover clinical trial, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts. Op. cit.*, pp. 15-16. **8.** Chervinsky P: Double-blind clinical comparisons between trimethoprim-sulfamethoxazole (Bactrim™) and ampicillin in the treatment of bronchitic exacerbations. *Ibid.*, pp. 17-18. **9.** Dulfano MJ: Trimethoprim-sulfamethoxazole vs. ampicillin in the treatment of exacerbations of chronic bronchitis. *Ibid.*, pp. 19-20. **10.** Medici TC: Trimethoprim-sulfamethoxazole (Bactrim™) in treating acute exacerbations of chronic bronchitis: summary of European clinical experience. *Ibid.*, pp. 13-14.

Economical b.i.d.

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole/Roche)

*Due to susceptible organisms. **Please see next page for summary of product information.**

Bactrim™

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General*: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS:

Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets*, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100; Prescription Paks of 20 and 28. *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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Acute Supraglottitis in an Adult A Case Report

Joseph A. Troncale, M.D.*

A 33-year-old man developed acute supraglottitis over a period of two days and developed respiratory difficulty. The diagnosis of supraglottitis was confirmed using direct fiberoptic laryngoscopy in the Emergency Room. He rapidly improved following treatment with parenteral chloramphenicol. Throat cultures grew Group A beta-hemolytic streptococcus.

Introduction

Acute supraglottitis is a severe bacterial infection which occurs mainly in children. Its occurrence in adults is being reported with increasing frequency.[1, 2, 3] To stress the need for early diagnosis as well as to point out the usefulness of direct fiberoptic laryngoscopy, the following case is presented.

Case Report

A 33-year-old male telephoned his physician at approximately 7 a.m. with a two day history of increasing pain in the throat and difficulty swallowing. He stated that on one or two occasions during the night he had difficulty breathing. His wife noted that his voice had changed and that he was drooling saliva. His physician examined him at the patient's home, and supraglottitis was suspected. The patient was brought to the Emergency Room of the University of South Alabama.

On physical examination the patient appeared ill and in mild respiratory distress. Vital signs: BP 152/88, T 100.1 F, P 100, R 18. HEENT — the pupils were equal, round, reactive to light, and the tympanic membranes were clear. The nose was clear. The throat was red, and the patient was having difficulty clearing secretions by swallowing. Using local anesthesia, a Machida fiberoptic laryngoscope was passed through the nose. The epiglottis and the surrounding mucosa were noted to be swollen and firey red. Lateral neck films of the soft tissue revealed enlargement of the epiglottic shadow. The remainder of the physical examination was essentially within normal limits. Throat and blood cultures were obtained. A CBC revealed a white count of 19,900 with 76 segs, 8 bands, 8 lymphs and 8 monos. The patient was admitted to the hospital.

After arrival to the floor his temperature reached a maximum of 102.9 F. Because of a history of penicillin allergy, parenteral chloramphenicol was begun.

The patient's hospital course was one of rapid and dramatic improvement. Fever and difficulties swallowing resolved over the next 48 hours. Blood cultures were negative, but throat culture grew Group A *Strep*. He was switched to p.o. cefaclor and discharged from the hospital on the third hospital day.

Discussion

Supraglottitis is being seen with increasing frequency in adults. The diagnosis should be suspected in any adult with pharyngitis when difficulty with swallowing or breathing is encountered or when a change in the normal voice is noted in addition to the above symptoms. The time sequence from initial onset of symptoms to stridor and obstruction may be extremely rapid. Although Group A *strep*. was isolated in this case, *H. influenzae* remains the most common organism. Other organisms implicated include *Staph. aureus,* pneumococci and *Neisseria catarrhalis*. Adults appear to acquire the non-*H. influenzae* supraglottitis more frequently than do children,[4] as seen in this case.

Early diagnosis is essential if tracheostomy is to be avoided. Some authors advocate the use of steroids[5] and humidification of inspired air as adjunctive therapy. The use of fiberoptic instruments for diagnosis as was done in this case has been previously reported.[6]

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The Sooner, the Better: Identification and Rehabilitation of the Child With Bilateral Sensorineural Hearing Impairment*

Dennis G. Pappas, M.D.†
and
Colleen A. McDowell, M.S., CCC-A

A study of 170 children with congenital hearing loss retrospectively identified 123 of them as having mild to profound bilateral sensorineural hearing loss. This research strongly supports the need for an early pediatric auditory screening program as well as a systematic high risk registry to maximize the development of such a child's potential.

Introduction

The state of Alabama does not have an organized system of high risk registries for screening neonatal and early childhood hearing loss, therefore, the pediatrician has become the first line of detection for moderately severe and profound hearing loss. It has been estimated that one in 750 infants born will have a hearing loss that will be detrimental to normal speech and language development.[1] This statistic increases to 1 in 60 born in the neonatal high risk nursery.[2] Recently, we undertook a study of 170 young children with bilateral hearing impairment which elucidated some of the problems facing the pediatrician and otolaryngologist with the system of retrospective diagnoses now being practiced. Our investigation strongly indicates a pressing need for early audiometric screening and intervention by the pediatrician and otolaryngologist, as well as a High Risk Registry, for the identification and rehabilitation of the hearing impaired child.

Discussion

The most productive years in the development of speech and language are from ages 0 to 3. Thus, the early diagnosis of hearing loss becomes crucial. Yet, the national average age for detection of a hearing loss is 2.5 to 2.7 years.[3, 4] By this age, normal hearing children are speaking intelligibly in at least two and three word sentences. It has been observed that a concerned grandmother usually initiates more hearing loss diagnoses in infants than physicians. A motivated mother, having another child or children and knowing the behavior of babies, is the next best diagnostician.[5]

Evaluating a young child's hearing levels demands a high index of sensitivity on the part of the pediatrician and otolaryngologist. One should take the parents' suspicions seriously as it has been found that, with approximately 1 in 3 cases, the parents' suspicions were confirmed with a subsequent diagnosis of a sensorineural hearing impairment.

*Study conducted under the auspices of The ECHO Foundation, 3608 Clairmont Avenue, Birmingham Alabama, 35222. Presented in part before the Alabama Chapter of the American Academy of Pediatrics, Gulf Shores, Alabama, September, 1982.
†Reprints: 2940 Clairmont Avenue, Birmingham, Alabama 35205.

TABLE I

	Sev/Pro	Mod/M-S	Mild	Total
Affected family	5	3	-	8
Asphyxia	2	1	-	3
Congenital virus infection	12	6	4	22
Defects of the ENT	3	1	4	8
Affected family and defect ENT	-	1	-	1
Elevated bilirubin	1	1	-	2
Low birth wgt., bilirubin, asphyxia	1	-	1	2
Low birth weight	4	-	-	4
Total on registry	28 (60%)	13 (38%)	9 (24%)	50 (46%)
Children with no HR factors	19 (40%)	18 (62%)	22(76%)	59 (54%)

10 children with postnatal meningitis were not included.

Summary of High Risk Factors for 109 children with sensorineural hearing loss. Severe and profound hearing losses tend to dominate the registry.

As we have previously reported, a neonatal high risk factor (Table I), the intelligibility of speech, a physical examination of abnormal facial features, the presence of a goiter, and a funduscopic examination for retinitis pigmentosa are other sensitive tools for the diagnosis of sensorineural hearing loss.[3, 7, 8]

The purpose of this paper is to examine some of the problems encountered regarding the necessary components in the early detection of bilateral sensorineural hearing loss as well as the appropriate medical and audiological treatment. Our retrospective identification study of sensorineural hearing loss delineates these components and illustrates the difficulties involved with delays between identification and intervention.

Some ''Fiction-Facts'' aid in the clarification of the purpose of this paper.

FICTION: A child must be 4 years of age to have a valid audiogram.

FACT: An infant's hearing loss is detectable at any age.

Bilateral sensorineural hearing loss may be detected at ages 0 to 3 utilizing both subjective and objective measures. In the majority of cases, the subjective observation of a child's behavioral responses to auditory signals is sufficient in the detection of a loss of hearing sensitivity as well as in the attainment of pure tone thresholds. It is not always possible to determine the degree of hearing loss for each ear per individual as many youngsters are ''hesitant'' to wear earphones. It is possible to define the pure tone thresholds for at least the better hearing ear. This is acceptable, however, as speech and language can develop with normal hearing in one ear. In the event that a bilateral sensorineural hearing loss is detected, fitting of binaural hearing aids can be achieved. Northern and Downs[18] provide a thorough discussion of the various behavioral observation audiometric evaluation methods.

TABLE II

Mild	5.6 mo to 10 yrs
Moderate	9 mo to 8.5 yrs
Moderately severe	8 mo to 3.1 yrs
Severe	9 mo to 4.4 yrs
Profound	7 mo to 3.4 yr

The Age Range for Identification of Sensorineural Hearing Loss in 109 Patients.

Auditory brain stem response (ABR) audiometry is an objective method whereby hearing sensitivity is measured by recording the brain's electrical responses to auditory stimuli. This is achieved by employing specialized equipment and often in young children, requires sedation to achieve optimal results. Although ABR audiometry is successful in detecting the presence of a hearing loss in infants, at best the degree and slope of hearing loss may be only estimated (normal, mild, moderate, severe, profound). Behavioral observation audiometry is the recommended method of delineating the presence of a bilateral hearing loss whenever possible, although ABR may be required in the early diagnosis of a loss in severely multiply handicapped children.

In our present study of the 123 patients with identifiable sensorineural hearing loss, only 4 patients were evaluated employing ABR. In these 4 cases an ABR was necessitated by the need for a ventilation tube insertion and time was of the essence in identification of the hearing loss.

FICTION: Any certified audiologist can determine an infant's hearing level.

FACT: Preferably an audiologist trained in pediatric audiology should do this testing. Usually it requires two such audiologists; one in the testing booth to detect behavioral responses while the other administers test signals.

From ages 0-3, the hearing levels should be elicited twice at weekly intervals to identify the presence and levels of hearing loss. If normal, the hearing test need not be repeated as often. At this time, the use of ABR in infants is costly as it often requires sedation and/or general anesthesia and may involve serial testing.

FICTION: Nothing can be done for this type of hearing loss anyway, so why not wait to have a hearing test in 6 months or one year?

FACT: Early diagnosis and treatment leads to more normal speech and language development.

Sensorineural hearing loss in infants is a treatable condition. The ultimate goal of any approach to teaching hearing impaired children today is early identification of the hearing loss, fitting of binaural hearing aids, early intervention through parent training, medical intervention and individual therapy. The goal of this approach is to maximize the child's success for mainstreaming into regular school and society.

Of the 123 patients identified in our study, the onset of amplification after identification of the hearing loss ranged from 1 month through 18 months. Even when severe hearing losses are diagnosed, the possibility exists that rehabilitation is postponed. Several reasons for this are: neglect by the parents and professionals, state agencies "red tape," and the adage of "let's confirm this in 6 months." Among the patients with bilateral sensorineural hearing losses who had been aided prior to being seen by us, the mode of amplification was monaural in 64%, binaural in 18%, a Y cord-type (one hearing aid with a cord and receiver to each ear) in 14% and a FM receiver (primarily used for classroom auditory training) in 4%.

Once an infant is identified as having a bilateral sensorineural hearing loss, amplification is recommended. Early auditory stimulation is crucial to counteract the potential effects of auditory deprivation. Binaural amplification is chosen whenever possible for several key reasons. First of all, listening with both ears has been documented to be advantageous when listening in the presence of noise.[9, 10] Because the child's world is not a soundproof booth, it is important that he be given the opportunity to develop listening skills in a noisy environment. Another consideration is the intensity benefit that binaural amplification affords. With two hearing aids, binaural summation results in an additional 3 decibles hearing threshold level (dB HTL) of loudness.[11, 12] In less than ideal listening situations, this additional 3 dB HTL can mean as much as an 18-24% increase in speech discrimination ability. Thirdly, localization skills can best be developed with two aids.[13]

In addition to these psychoacoustic benefits, there are several practical considerations which render binaural fitting imperative. Research has shown that as many as 45-50% of the hearing aids on children are not functioning adequately.[14, 15] The child with only one aid may be without sound. By creating "minimal" changes in hearing, recurrent otitis media is an added problem for these children who are already at an auditory disadvantage. A mere 15 dB shift in hearing threshold can mean the difference between hearing and not hearing speech. The child with two aids is not as susceptible to problems caused by unilateral fluid.

Through auditory training, young children with sensorineural hearing loss learn to develop their listening skills.[16] They learn to listen for very soft sounds. Ling and Ling have reported that if a child has hearing through 1000 Hz, he should be able to hear all vowels at a distance of at least five yards. If the child has residual hearing through 2000 Hz, he should detect the majority of consonant sounds.[17] Finding children with sensorineural hearing loss is of no benefit unless amplification procedures are implemented immediately. In order for any rehabilitation approach to succeed, maximum use of residual hearing must be the number one priority. Without hearing, early intervention programs cannot be effective.

In review of the cases presented in Table II, there was an inverse relationship between the average age at identification and the degree of hearing loss. The more severe the loss, the earlier in life it was diagnosed. This finding is not unexpected when one considers that milder impairments often masquerade as inattention or behavior problems before hearing loss is suspected. Consequently, a mild congenital sensorineural impairment may not be identified until school age when problems with "phonics" develop. Of course, the severe loss has a more drastic impact on the child's verbal language development than a milder loss. It is increasingly apparent, however, that the mild loss is not as innocuous as previously assumed.[18] It was determined that 17% of the 123 subjects had known progressive sensorineural hearing loss.

Table I is a synopsis of material presented in a previous communication.[8] However, with reference to Table II, it must be emphasized that retrospectively only 46% of these patients would have appeared on a high risk registry. One would have to conclude then that both a high risk registry and infant screening are necessary in diagnosing hearing losses at an early age.

Summary

The importance of the pediatrician and otolaryngologist in preventing additional psychoauditory difficulty among bilateral hearing loss children was demonstrated from a retrospective study of 170 patients having early sensorineural hearing loss. By the advocacy and implementation of effective auditory screening programs, the pediatrician and otolaryngologist can eliminate the need for such retrospective identification as found in the present study. In addition, the pediatrician or oto-

laryngologist can insure maximum success in the development of speech and language skills by insisting on fitting two hearing aids on children with bilateral sensorineural hearing impairment. Both an organized system of high risk registries and an early auditory screening program are necessary for effective detection and rehabilitation of bilateral sensorineural hearing loss among children. Implementation depends on the pediatrician and otolaryngologist.

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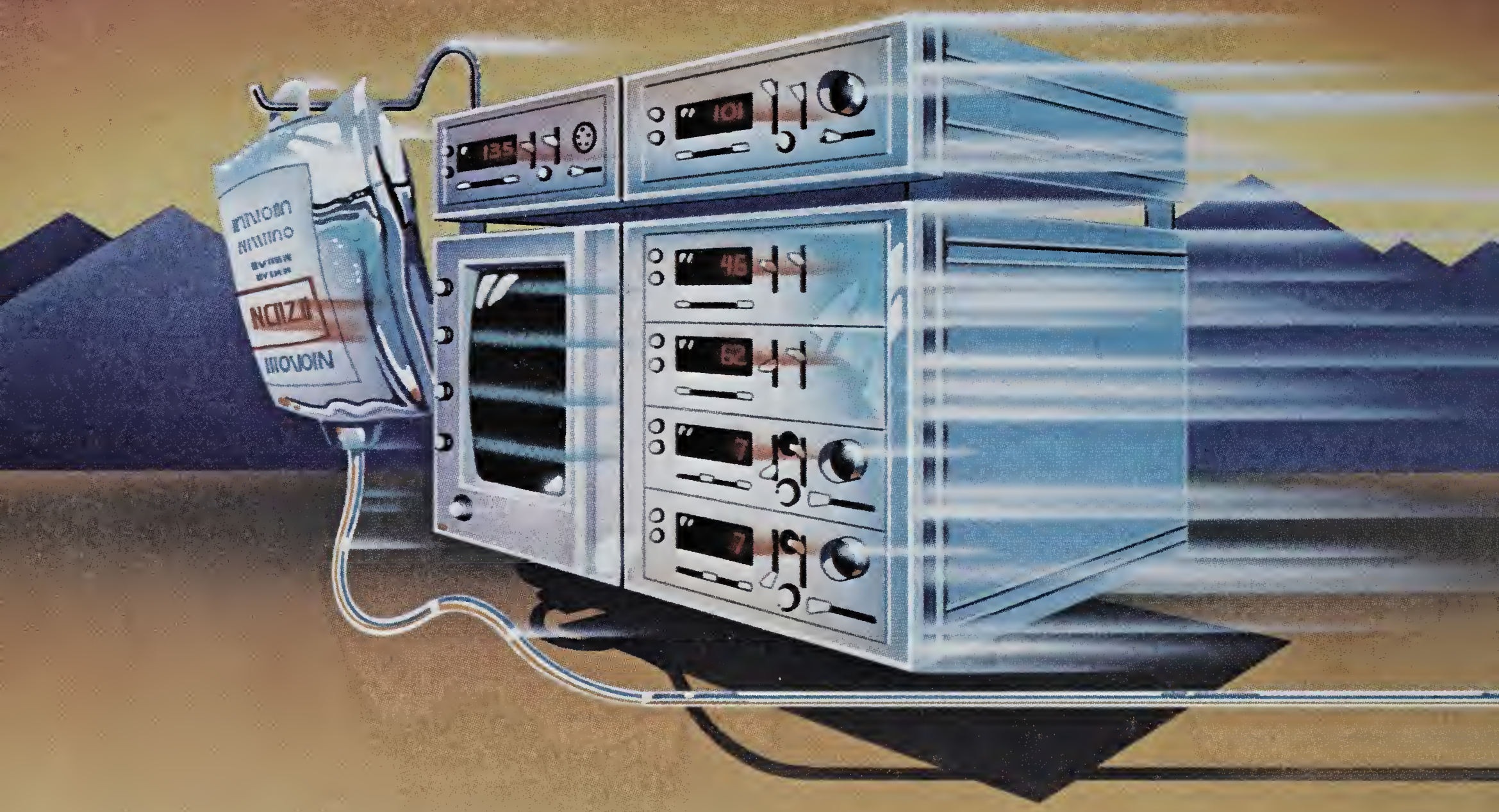
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But Doctor, You're Rich

Samuel Eichold, M.D.*

Repeatedly you have heard from a friend, the workman on a job, or a patient that there is a great difference between themselves and you! It is the matter of money. "Doctor, you're rich."

Perhaps a physician after long years of practice of his profession has attained a relatively high degree of economic security. Does it require a defensive attitude? Does his status demand of him an apology? Cannot the economic position of the physician be like his spiritual or political affiliation, a matter remote to the intrusion of friend, patient, or employee?

Where a man lives, what car he drives, how he dresses and in general how he lives are very apparent. The expenditures of an individual may not represent his actual wealth, but they denote a pattern of living that may classify him as being one of those considered by the masses as "rich." So, the physician may be judged beyond a reasonable doubt to have worldly goods in excess of quantity sufficient, and to be in that extraordinary category of being a wealthy man. Now, what can the physician say in reply to this categorical statement, "You are rich," and belie the misconception that his riches were acquired inappropriately, as a drain off the sick and poor?

One should recognize that there is nothing wrong with the accumulation of worldly goods. Through simple conservation of resources and prudent investments one can achieve the status of riches during a normal lifetime. This should preclude the stigma of wealth. To be sure, some individuals have achieved the position of extraordinary standards of living with acquisition of monetary resources by devious means or outright frank dishonesty. Can this be said of all who have been frugal, industrious, hard working, or even lucky?

Some individuals have a capacity to think, setting them apart as being smarter than the common herd.

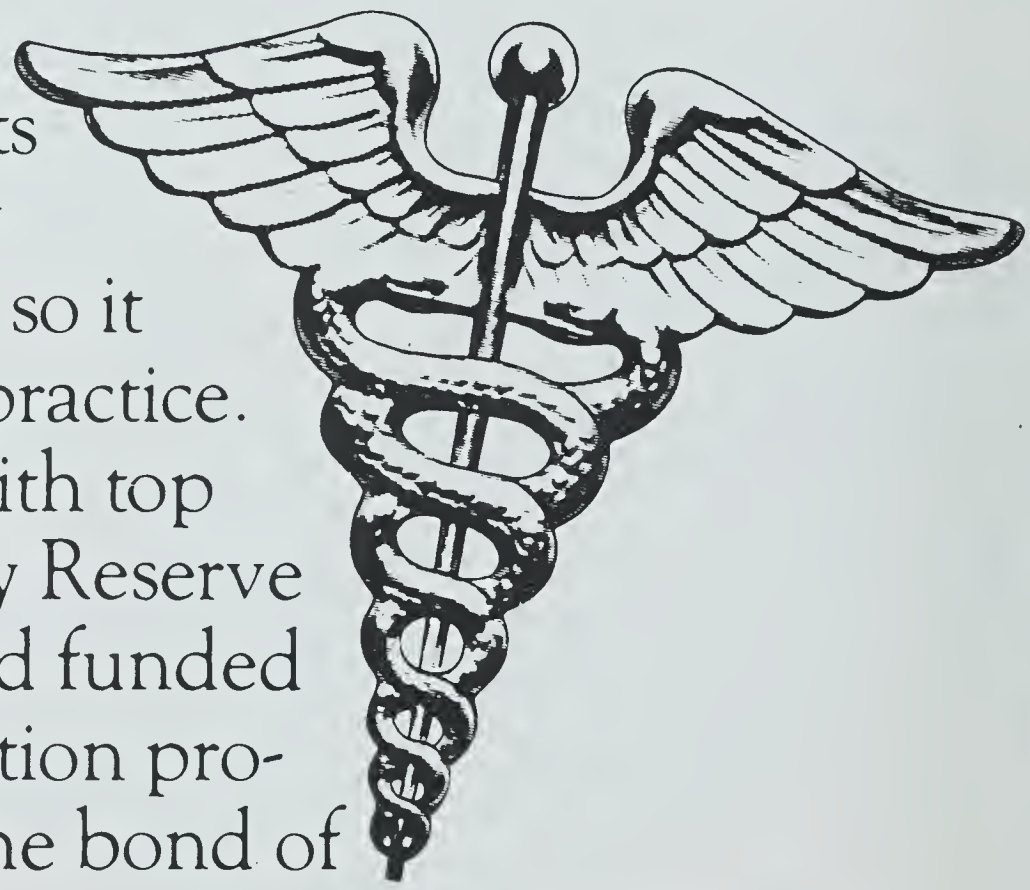


Some of these more intellectually capable individuals had the determination and desire to obtain a medical education. This was done by long years of arduous effort and perserverance. Others fell by the wayside

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and sought quicker means of enjoying life, liberty and the pursuit of happiness.

A medical student has already had three or four years of college with a Bachelor's Degree and may then proceed to burn more than midnight oil. He endures anxious and trying experiences with all manner of noxious and foul situations to obtain the degree of Doctor of Medicine. Then what does that lead to, other than further hardships of graduate training. That includes a minimum of two and up to five years with long hours of work, modest monetary reward and strenuous competition on every step of the way up the physician's ladder. For the business man there are many rewards and there is freedom from academic competition as they exercise their talents and enjoy the pursuits of life that no embryo physician could even imagine.

Monetary rewards in the non-professional world may provide more than just enough for marital existence and the creation of a family. Retirement benefits are provided under the Social Security Act and the employer's retirement program as provided will act as enforced savings. Salary to pay for life insurance plus even a savings account may accrue to the young worker. A union or cooperative worker's loan might permit purchase of home and furnishings years before a doctor is ready to begin a practice.

The average physician establishes his practice after the age of thirty. Prior to this time he might be able to enjoy a happy home but his wife, of necessity, may occupy the dual position of wife and wage earner. The supplementary income is not for luxury but for necessities of life. Possibly a better internship or residency could have been attained and with higher professional acclaim but the need to provide for a wife and child necessitated a position in a hospital that paid more and provided less in the development of skills.

After university and graduate training, there is that experience, beyond expectation, of setting up a practice. Does the physician have a particular "brand name" or a quality piece of merchandise, and at a bargain price? He has only the commodity of his personality, his skill, his diligence and determination in combination with a spirit of sacrifice and desire that makes him available day or night to any who may find need of his services!

In what environment does a physician work, as compared with another bread winner? It may be in the highest rent area. His reception room should have the correct decor and the office has to be equipped with the vintage of the present day. He is to be "used" regardless of the patients' appreciation or ability to tender remuneration. He cannot escape the hostility and criticism of one who is incapable of evaluating and appreciating that which has been performed.

Even a legal problem may develop in which the physician, as the defendant, has been victimized because of youth, insurance protection in the maximum, or a peculiar situation. The patient, as the plaintiff, may have been advised by an attorney seeking a situation in which the suit of the plaintiff will not only benefit him monetarily but which can also destroy the physician and his entire medical career.

Where are the stakes for success higher? A neurotic may enjoy poor health, yet an individual with organic or infectious diseases does not wish to be so afflicted. The doctor may be the last one that is wanted to resolve either problem. These patients appreciate that there is expense to be considered when medical care is sought.

The last thing that the neurotic or the functionally ill and even the truly incapacitated organic and infectiously afflicted individual wishes, is to incur expenses for medical care. A patient has so many more enjoyable ways to spend money. The physician places his reputation on the line with every therapeutic endeavor for even a small return.

Success may arrive with a large practice and the accompanying fame. It has a monetary reward, but with a corresponding sacrifice of freedom. Modern communications can summon the physician at the beck and call of those whom he serves. Does this allow for a so-called normal existence of doctor, husband or father?

How long can the successful physician continue at the seven-day pace, twenty-four hours a day, of being available? A partnership, a group practice, or even departure from the area does not always excuse the physician from the oneous services demanded by many or the particular few!

Yes, there is an answer. Water seeks its level, the freely falling body responds to gravity. A prudent, frugal, industrious and conscientious physician cannot fail to attain relative riches! Is there any reason that he must deny or apologize for the inevitable?

Doctor, be proud of the position to which desire, determination, discipline and discretion have elevated you. ⊡

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Intrauterine Testicular Extravasation?

Mamoun R. Pacha, M.D.
Sylacauga, Alabama

This is a report of a very unusual case of "intrauterine testicular extravasation." Review of the literature showed no other case with such presentation.

Case History

This is a full term black male born at the hospital by normal vaginal delivery of a 29-year-old female following a normal pregnancy with no history of trauma or hormonal therapy. Physical examination of the infant at 1 day of age revealed a normal infant, abdomen soft with no palpable mass. Examination of the penis revealed a phimosis but upon retraction of the foreskin the glans penis appeared to be normal. Scrotal examination revealed both testicles to be located outside the scrotum and there was bilateral scrotal defect right at the base of the penis with spermatic cord protruding through. The testes and the epididymis appear normal in size and consistency.

Hospital Course: The baby underwent routine laboratory workup — CBC, urinalysis, chest x-ray, IVP — all within normal limits.

The baby was taken to surgery. There was moderate edema in the scrotal cavity but no hematoma and scrotal pouch was created by blunt dissection and bilateral orchiopexy was accomplished. A testicular biopsy was done at the same time and the pathology report revealed no abnormalities. The infant had a normal post op recovery and was discharged from the hospital on the third day.

Follow up visit revealed the patient to be developing normally at age six months with no GU problems. The wound had healed nicely.



Figure 1

Review of urological textbooks and journals showed no other case similar to this, and from embryological standpoint how do you explain it? Could it be the opposite side of undescended testicle? ⊡

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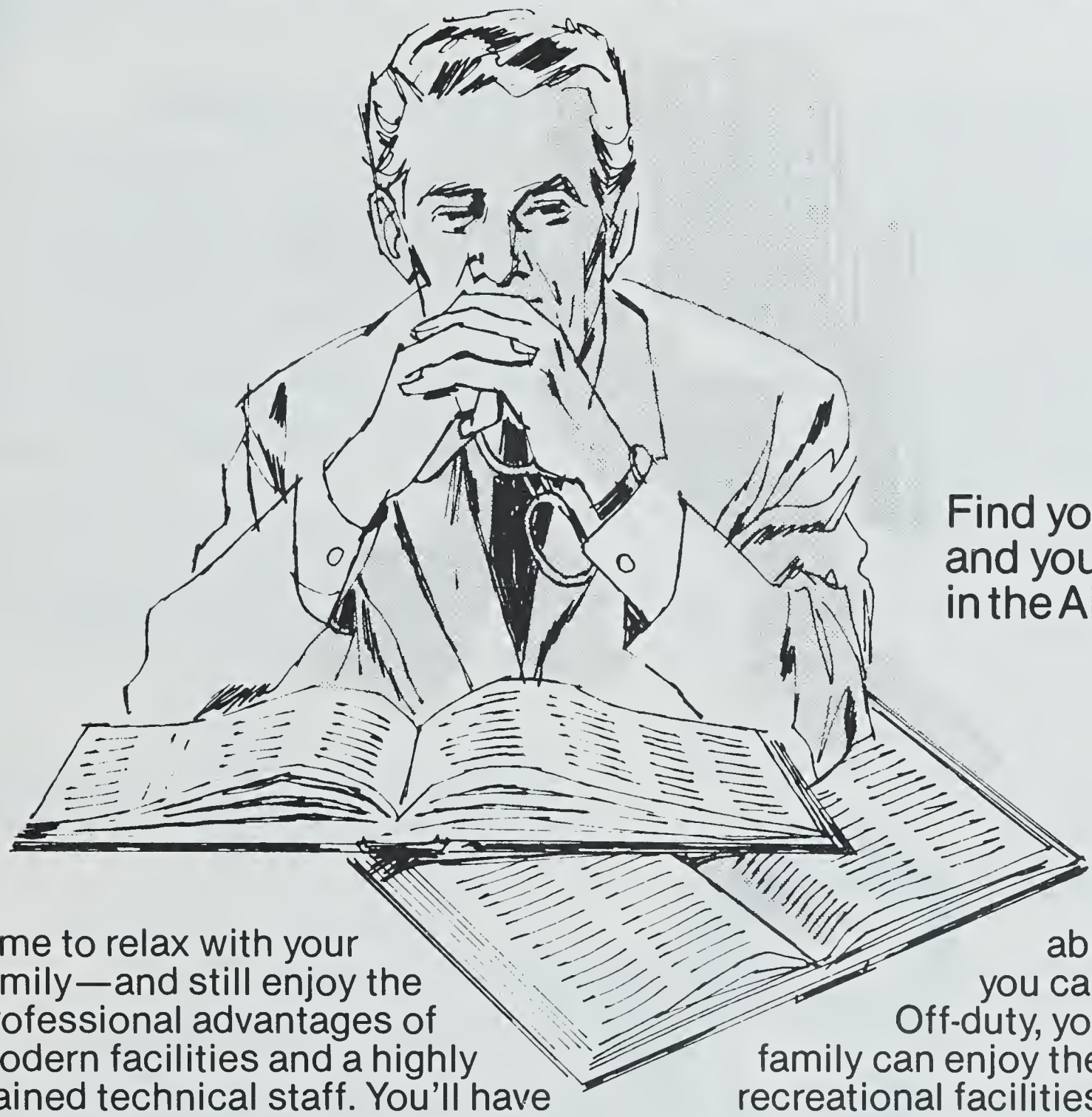
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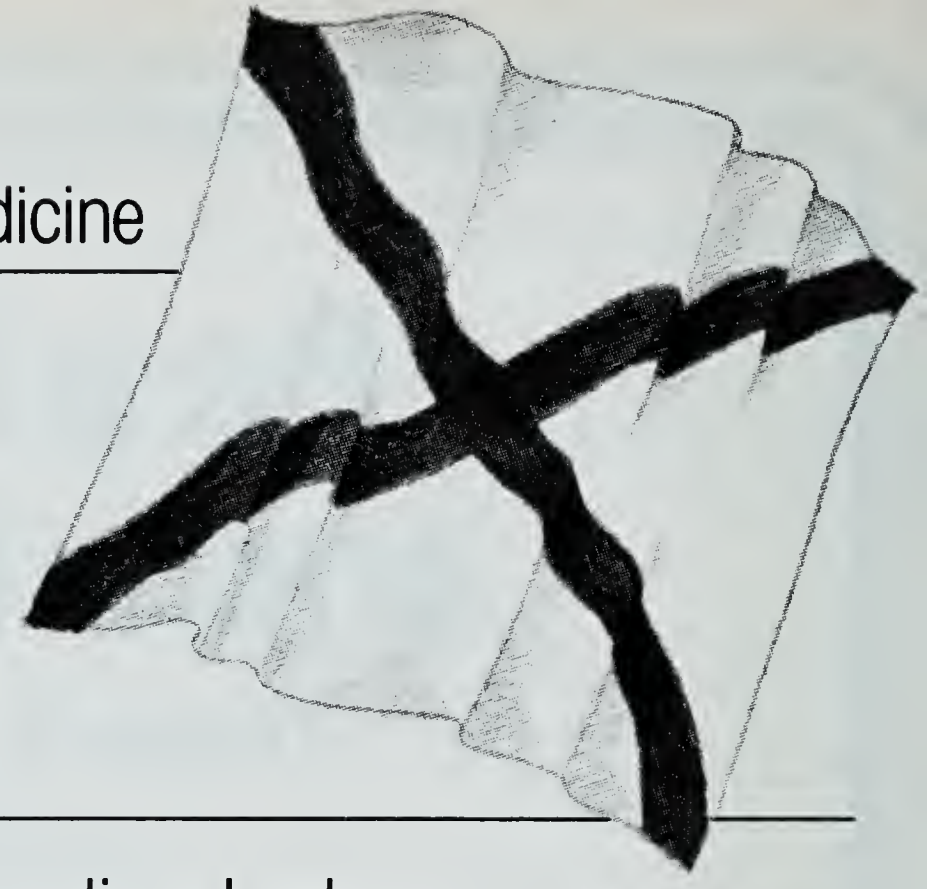
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Dr. James Marion Sims

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In 1845, while examining a woman for a retroversion of the uterus, he placed her in the knee-elbow position, subsequently called "Sims' position." By chance he discovered that placing two fingers in the vagina allowed external air pressure to push the vagina into its normal position. Later he used the bent handle of a spoon, and from this simple tool he developed the Sims speculum, which made possible successful viewing and surgical treatment of vesicovaginal fistulas.[1]

Basis for specialty of gynecology

Sims also developed a special suture of silver wire and a catheter for emptying the bladder during recovery.

The Sims position and Sims' three surgical implements became the four components basic to gynecology. His published results describing their combination in practice created a profound impression within medical circles.[1,2]

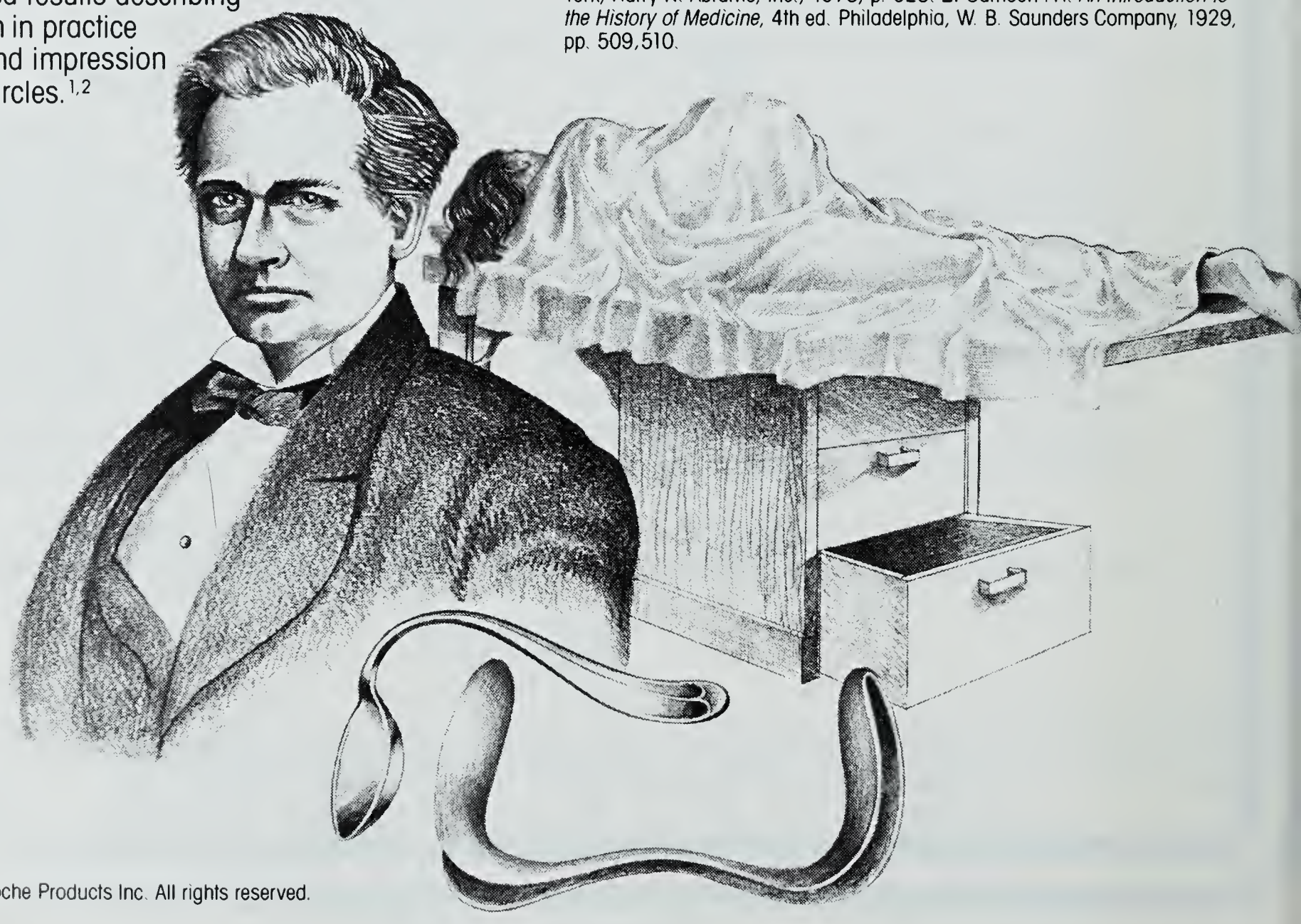
International esteem

In 1861, Sims was invited to perform his now-famed fistula operation before the surgical elite of Europe. His writings were translated into German, and he was hailed as a peer by noted French physicians.

Success seemed to stimulate Dr. Sims. Prior to his death in 1883, he gained credit for other major surgical advances—a method for amputating the cervix uteri, a significant description of the condition he called "vaginismus," his procedure for cholecystotomy and his important medical paper on aseptic intraperitoneal invasion.[2]

Dr. Sims worked in Europe and in New York City after 1853—and his statue stands today in New York's Bryant Park.[2] But he accomplished his most significant work—and is esteemed in medical history—as the gifted surgeon from Alabama.

References: 1. Lyons AS, Petrucelli RJ II: *Medicine: An Illustrated History*. New York, Harry N. Abrams, Inc., 1978, p. 523. **2.** Garrison FH: *An Introduction to the History of Medicine*, 4th ed. Philadelphia, W. B. Saunders Company, 1929, pp. 509,510.



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When the history reveals anxious depression...

For the estimated 70 percent of nonpsychotic depressed patients who are also anxious,[1] Limbitrol provides both amitriptyline, specific for symptoms of depression, and the effects of Librium® (chlordiazepoxide HCl), the tested and dependable anxiolytic. Limbitrol is, therefore, a better choice for these patients than dual agents that contain a phenothiazine, a class of antipsychotic drugs used infrequently in nonpsychotic patients.[1]

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- ☐ Gastrointestinal upset—73%

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Patients should be cautioned about the combined effects with alcohol or other CNS depressants and about activities requiring complete mental alertness such as operating machinery or driving a car.

References: 1. Rickels K: Drug treatment of anxiety, in *Psychopharmacology in the Practice of Medicine,* edited by Jarvik ME; New York, Appleton-Century-Crofts, 1977, p. 316. **2.** Feighner JP *et al: Psychopharmacology 61*:217-229, Mar 1979. **3.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

In moderate depression and anxiety

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Tablets 5-12.5 each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)
Tablets 10-25 each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt)

Please see summary of product information on following page.

LIMBITROL® TABLETS Ⓝ Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.
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Warnings: Use with great care in patients with histary of urinary retention or angle-clasure glaucoma Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Clasely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).
Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Since physical and psychological dependence to chlardiazepoxide have been reported rarely, use caution in administering Limbitral to addiction-prane individuals or those who might increase dasage; withdrawal symptoms fallowing discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history af seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver functian tests and blaad counts are recommended during pralanged treatment. Amitriptyline companent may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated: sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitral shauld not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, aversedation, confusian or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alane: drowsiness, dry mouth, constipation, blurred vision, dizziness and blaating. Less frequently occurring reactions include vivid dreams, impatence, tremar, confusion and nasal congestion. Many depressive symptams including anarexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The follawing list includes adverse reactions nat reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations myocardial infarctian, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bane marraw depressian including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tangue.
Endocrine: Testicular swelling and gynecomastia in the mate, breast enlargement, galactorrhea and minar menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration af 1 to 3 mg physostigmine salicylate has been reparted to reverse the symptoms of amitriptyline poisoning. See complete product informatian far manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lawer dasages are recommended for the elderly.
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Executive Director

continued from page 4

ership role. Paying lip service to economy will no longer cut the mustard, Dr. Hutchinson believes; doctors must either demonstrate they mean business or forfeit the opportunity to prevent cost-cutting moves from doing wanton damage.

I hope you will pay careful heed to his words, all the while remembering that because he does not shout ruin and cry wolf does not mean he lacks conviction. It may be trite to say so, but Dr. Hutchinson is truly one of those who would always prefer to light one small candle than to curse the darkness.

Lon

President's Page

continued from page 7

the country. All too often I have found physicians too quick to ask, "What is the personal sacrifice I will have to make?" rather than asking, "What is the potential level of contribution?"

Our organization desperately needs new faces and new blood, not only to bring new ideas and fresh energy to our association, but to share the responsibility with those now carrying too heavy a load.

Your state Board of Censors is a perfect example. Here is a truly dedicated group of individuals who are individually and collectively "toting too much water."

I can tell you first-hand that Association work can be very stimulating and even exhilarating. In these periods of change, timely contributions can be almost immediately fruitful. You will meet new and different people, and be stimulated to learn about new and different subjects.

But if you do not have the talent or the energy to become actively involved yourself, communicate with your elected officers. Also, support a partner that does. (I have received complete support from Ernie Moore and Phil Walton.) This year has reaffirmed my long-held belief that information too often in our Association flows from 19 South Jackson Street to the individual members, and far too little returns from the individual members to your officers. While I have appreciated, and in some instances, been profoundly moved by your letters and calls to me this year, all too often I have not been aware of your opinion.

As I have traveled around the state and met new people and rekindled old friendships, I was reminded of the incredible mass of talent in our organization. Through the selection process and training, physicians as a group could be a formidable force. I would hope in these changing times that you would be stimulated to action. The health care delivery system that you could help devise will bring the appreciation of your patients. Your contribution will be returned as personal growth and enrichment.

Ron

Victims of Terrorism: The Physical, Psychological and Spiritual-Existential Effects

Joseph A. Troncale, M.D.*

The subject of political terrorism has received abundant discussion in recent literature and publications, and terrorism has been analyzed by various authors from numerous perspectives. This body of research on terrorism, along with increasing interest in victimology, has helped develop collections of research specifically concerned with the victims of terrorism. After a brief historical overview, this paper proposes to examine these victims from three perspectives, that is, 1) the physical, 2) the psychological, and 3) the spiritual-existential effects.

Historical Perspective

Violence is rooted in the history of mankind. Although there have been eras of relative peace, no generation has been exempt from either its direct influence or its long term effects. Philosophical and religious arguments concerning the reasons for the consistently violent behavior of man abound. Ultimate solutions have obviously been elusive. Depending on the way one wishes to view the problem of political terrorism, however, the *raison d'etre* for this type of violence becomes extremely important in attempting to rationally deal with terrorists and their actions.

In his book *Terrorism,* Albert Parry argues that despite the whole of history that preceded it, the French Revolution in 1793-4 began a unique era of violence.[1, 2] For the first time, violence was organized as a political philosophy, and a systematized political machine was used to achieve the government's ends through the use of terror. It was during the dark days in the late 18th century that the now familiar rationalization was used that ''violence is necessary for the good of the people.'' Ironically labeled organizations such as the Committee of Public Safety were organized to promulgate the death and destruction of political enemies. In the end, Robespierre, the Great Terror's chief figure, was executed by other members of this group which he so infamously led.

Other parallels with current terrorist governments and their forerunners during the French Revolution are inescapable. Dissident political parties were outlawed, and their members were hunted down as in the case of the Girondins. The term ''counterrevolutionary'' was coined during this period by the chief prosecutor of the Paris Tribunal, Antoine Quentin Fouquier-Tinville, who boasted that he prosecuted over 2,400 of them, most of whom were later guillotined.

There have been many variations on the wholesale bloodletting theme throughout the centuries. These include isolated political assassinations, armed revolutions, governmental terrors of this century,[3] and most recently, the romanticized but equally dangerous and sophisticated urban guerrilla.

One author calls these modern guerrilla groups ''bureaucratic terrorist organizations'' (B.T.O.s) because of their sophisticated structure.[4] Many B.T.O.s have the support of legitimate governments, often making discussions of terrorist related problems exercises in semantics, not determined by past or present standards of international law but rather by whose side a government happens to favor at a given time.[5, 6]

Former Secretary-General U Thant stated, ''Any group of extremists, however justifiable some of their grievances may be, can thus, through hijacking or aircraft or kidnapping of foreign diplomats, receive international attention, remain unpunished, involve innocent people, and sow the seeds of international anarchy.''[7] The ''innocent people'' are the unrecognized pawns, the victims. Although guileless in the eyes of the world, ''no hostages are considered inno-

* From the University of South Alabama, Department of Family Practice, 2451 Fillingim Street, Mobile, Alabama 36617.

cent'' by the terrorists.[8] By definition, terrorism can never be a victimless crime.[9]

Physical

The victims of terrorist acts may be exposed to a variety of lethal weapons and devices. The age-old weapons so frequently identified with terror and assassination such as the gun and bomb, deadly though they may be, are now being augmented by more sophisticated armaments such as heat-seeking missles, biological and chemical agents, and nuclear devices. These unconventional weapons are not only horrible in and of themselves, but the potential for their use against large populations looms as an even more frightening prospect for governments and agencies attempting to protect the population at large.

Numerous textbooks have been written on traumatology, and the discussion of the various specific injuries is beyond the scope of this paper. An excellent discussion of the physical problems, such as the numerous types of wounds which may potentially be suffered by the victims, has been compiled by Silverstein.[10] In his chapter on the medical survival of the victims of terrorism, he discusses the complete spectrum of injuries that might be expected following a terrorist attack. Because the range of weapons available today to terrorists is essentially the same at that of regular standing armies, casualties may be expected to be of a similar nature, such as blast and fire injuries, to that of any battlefield. As the technology associated with weapons becomes more sophisticated, the range and the severity of casualties increases. With biological, chemical and nuclear weapons now in the hands of terrorist groups, military physicians and other scientists trained in the treatment of these types of injuries are an essential part of the treatment teams dealing with these types of casualties.

As has been shown in numerous mass casualty situations, proper on-site first aid, rapid transport and experienced triage at designated medical centers is vital for victims' survival. Realistic disaster plans should be formulated by these trauma centers, and responsibilities should be clearly defined for the hospital personnel involved to minimize morbidity and mortality of the victims.

Ochberg, who has written extensively about the victims of terror, suggests that several weeks to months after a stressful event occurs, psychophysiologic damage can result. He suggests that survivors of such episodes should receive seminanual medical examinations for at least the first two years after such an event.[11]

In her paper, ''Victims of Terrorism: The Effects of Prolonged Stress,'' Fields compares various groups of hostages and lists various reactions which were common to these groups. Physiologic symptoms, such as gastrointestinal and metabolic disturbances were cited. Long term effects such as ''problems in sexuality, sleep and dreams, and other memory and working functions'' were also mentioned.[12] Other papers dealing with the subject cite anorexia, dry mouth, diarrhea, allergies, headaches, vomiting, hypertension, tachycardia, ulcers, fatigue and insomnia as prominent features.[13, 14]

Psychological

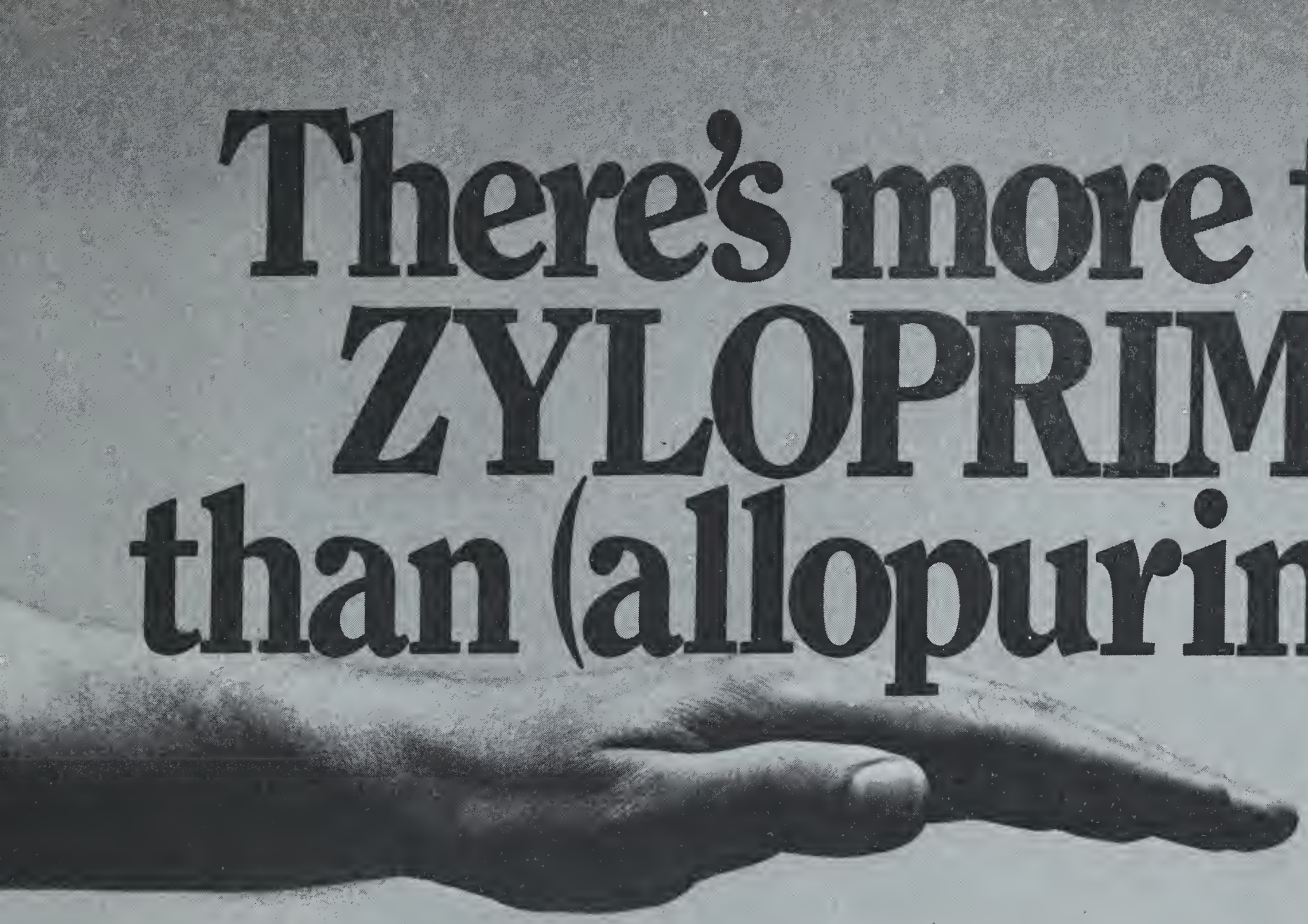
Perhaps the most widely studied, and certainly the most widely publicized effects of victimization concern the psychological aspects. The earliest works on victimization were concerned with various war-related situations such as prisoners of war and Nazi Death Camp survivors. These studies revealed the tremendous long term problems associated with such ordeals, particularly feelings of guilt, shame, irritability, resentment, loss of self esteem, etc. Furthermore, these feelings were shown to transfer across family and generational lines, so that individuals other than the victims themselves become effected psychologically.[15, 16]

Hillman points out that the hostage experience is different than the P.O.W. or concentration camp experience in that the hostage is usually incarcerated for a shorter duration and frequently does not include physical injury or malnutrition.[17] His study concerned 14 correctional officers who were held hostage at the New Mexico State Penitentiary in February, 1980. He concluded that the chief psychological trauma that these officers experienced was helplessness, existential fear, and sensory input overload.

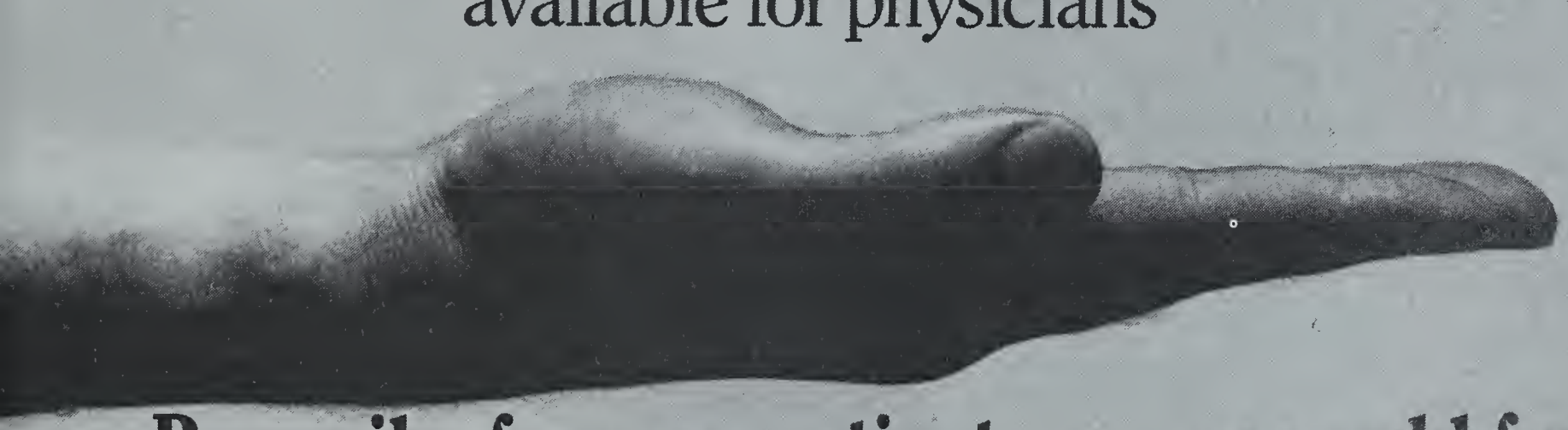
Symonds, in a paper entitled ''Acute Responses of Victims to Terror,'' divides the psychological manifestations into immediate and long term effects. As one of the immediate effects, Symonds uses the phrase ''frozen fright'' to describe the paralysis of affect that occurs when one is trapped in an overwhelming dilemma such as a hostage situation. He postulates that this is a reaction which focuses all concentration on the terrorist to assure the victim's survival.[18] In fact, Hillman's group, the guards were quickly forced into a ''frozen fright'' situation since any complaints caused them to be beaten severely or bound more firmly.

Long term psychological effects are numerous. Because of the helplessness to which the hostages are subjected, persistent rage and intrusion of thoughts about the event is frequently seen. When a hostage is injured in a terrorist situation, fear of repetition of the event and feelings of responsibility for the event emerge.[19] In a study of the long term psychological effects of the victims of bombings that occurred in Birmingham, England in 1974, it was shown that a large number of the survivors had tremendous social, psychological and employment problems when studied two years after the event. These problems were evidenced by marital difficulties, drug and alcohol dependence, phobic symptoms, and high job incapacity statistics when compared with a matched control

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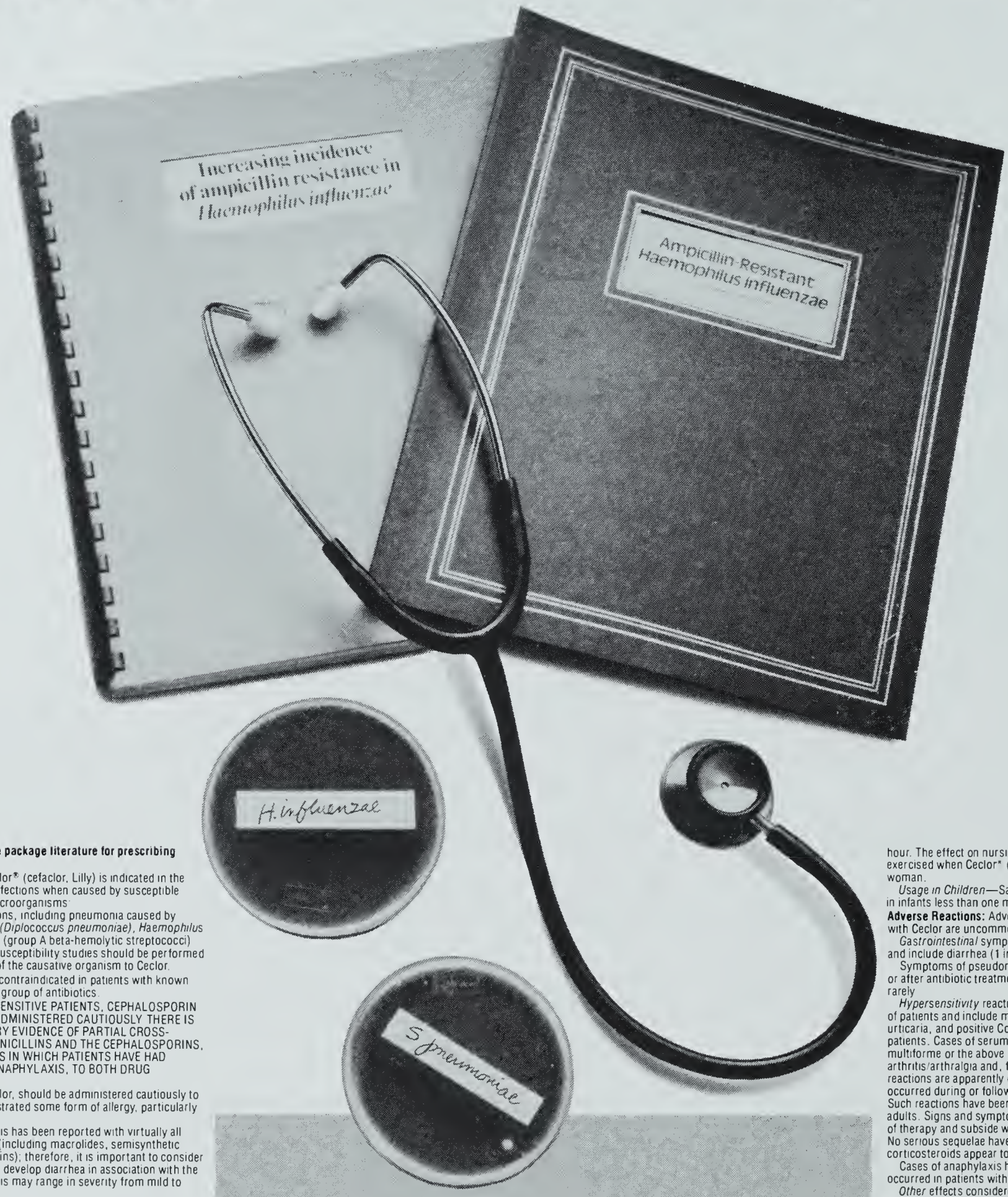
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Brief Summary. Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions*—If an allergic reaction to Ceclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

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Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers—Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor® (cefaclor, Lilly) is administered to a nursing woman.

Usage in Children—Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below:

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations of SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.[8]
Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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group.[20] Similar psychosocial symptoms were reported by Hellekson-Emery concerning an American hostage of the Teheran incident.[21]

Perhaps one of the most publicized psychological reactions seen in a hostage situation is a phenomenon labeled "the Stockholm syndrome" in which positive feelings originate in the hostage toward the aggressor. It has been explained psychodynamically as a pathological transference based on infantile gratitude and dependence since the captor holds the hostage's life in his hands. Ochberg defines the Stockholm syndrome as one or more of the following three conditions: 1) positive feelings on the part of the hostage toward the hostage-taker; 2) negative feelings on the part of the hostage toward the authorities responsible for rescue; and 3) positive feelings reciprocated by the hostage taker toward the hostage.[22] The practical significance of this situation is quickly evident. No hostage can be trusted to cooperate with rescuers. Hostages remain "psychologically hostage" sometimes long after the experience is over.[23] Hostages may not wish to testify against their captors and, as in the case of Patricia Hearst when a hostage situation is prolonged, the hostage may "join" and actively aid their captors.

Spiritual-Existential

"Violence alone makes it possible for the masses to understand social truths." — Frantz Fanon

"Whoever of you loves life and desires to see many good days, keep your tongue from evil and your lips from speaking lies.

Turn from evil and do good; seek peace and pursue it." — Psalm 34

As was alluded to in the initial segment of the paper, the problem of terrorism, both to the aggressor and his victim, becomes a search for the reasons for such behavior. The victim is made to face the reality of death, and life which is so dear becomes cheapened by the whim of a fanatic. However diverse particular beliefs and dogmas may be, at the heart of every rational philosophy is life itself. Terrorism, through a series of curious rationalizations, becomes the antithesis of this human value as individual hostages are dehumanized or killed as a means to the terrorist's ends. The victim is reduced to an unwilling prop in a play for which he usually has neither understanding or interest. Even victims who are targeted because of roles they play in organizations which terrorists have chosen as enemies have minimal input into final solutions because terrorist demands and goals are so global in nature.

In *The Broken Connection,* R. J. Lifton discusses the cultural and psychodynamic aspects of victimization. He points out that the victimizer requires victims to prove his own immortality. He cites the persecution of the Jews during World War II, American Blacks over the past two centuries, and the *Eta* peoples of Japan as cultural examples of this curious relationship.[24] Terrorists and their victims provide an equally suitable illustration, however. In fact, the Japanese terrorist Okamoto, involved with the Lod Airport massacre on May 30, 1972, stated, "We three soldiers, after we die, want to become 3 stars of Orion . . . I believe that some of those we slaughtered have become stars in the sky. . . ."[25] It is interesting to note that "immortality" is generously extended to some of the victims! The victim remains a means to an end. In this case, the means to the terrorist's "immortality."

On a personal level, the victim finds that he has lost trust in his own integrity. Because of society's unwillingness to accept the reality of undesirable events, there is frequent social stigmatization and isolation from the community.[26] The victim, then, remains the victim. Although many victims are sustained by their religious beliefs during the ordeal as in the case of the New Mexico prison officers, their integrity as persons is frequently diminished after the event. Day to day realities must once again be coped with after the "celebrity" status of former hostages fades along with the disappearance of other support structures.

As has been mentioned, terrorists can use violence only through extreme rationalization. Victims, however, can recover from this violence only through a long healing process requiring the integration of events that can never be adequately explained or understood by society, much less by the victim.

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Challenges for the Future

When we think about the Auxiliary to the Medical Association of the State ofAlabama's role in the years ahead, we must realize that it will be affected by the many changes taking place in the volunteer sector.

We know that no organization stands still. It either moves forward or slips backward, and the choice is our to make. In the past 60 years we have become a powerful organization with a strong voice. Through the dedicated work and cooperation of officers, committee chairmen and members, we can look with pride at the significant accomplishments as evidence of our strength and success. As we look ahead and recognize that life is never static but constantly changing, we must adapt to new conditions and new challenges as they occur. We must continue to look for new and better ways to serve.

These new approaches must stimulate and motivate the membership. Volunteer efforts must be worthwhile, not only to those served, but stimulating to those serving. We must be more professional, for an ever-increasing number of auxilians are professional people. With the realization that most spouses of medical students, interns and residents are in the work force, and a large percentage have, or will establish careers of their own, it is clear that Auxiliary goals must be objective and meaningful.

If we are to interest these persons in joining and serving, we must offer them an organization that is efficient and flexible, with activities that will mesh with their own schedules and interests. Along with these challenges, we must offer them sociability and friendship, which is easy with congenial, interesting and talented individuals.

Motives for Participation

Other motives for participation are: the desire for self-development and enrichment, the desire to exercise leadership and administrative talents and the desire to experience a variety of training opportunities. Future programming should offer career development for our younger members, so that while they support Auxiliary, they are improving their own skills.

Our projects must be carefully chosen and have realistic goals. With the cutbacks in government programs, there must be a massive revolution to moving back to caring for one another. Our capacity to care is the thing that makes Auxiliary a vital force in this revolution. Our impact on the communities we serve

will depend on our expertise as volunteers. In order to improve our role as volunteers, we must realize that changes may be necessary, and innovation may be the only way to achieve them. So what if we rock the boat if, in doing so, we contribute to the health and progress of the organization? To remain unchanged and constant is to stagnate and drive the membership into seeking other avenues for using their time and talents.

New programs should be introduced regularly to give members alternatives. There should be something for everyone, with freedom of choice and flexibility of timing.

We must have a unified voice and collaborate more effectively within our own organization at all three levels: county, state and national, and with other groups whose objectives and goals compliment our own. As we consider new projects, every effort should be made to avoid fragmentation. A few goals, well-defined and accomplished, are far more meaningful than a number of not so successful ones.

Acceptance at All Levels

One change already recognized is the increased respect and acceptance of Auxiliary by the medical associations at all three levels. The Medical Association of the State of Alabama realized what a strong right arm we give them and have made us an integral part of its organization. More and more county medical societies are inviting auxilians to sit on their committees, and we have a strong working relationship with the American Medical Association. They are quick to admit that ''we can do more together.'' Through a cooperative approach, staffs and members generate and share knowledge, conduct studies and are proving that interaction aids strength, as we endeavor to preserve, protect and promote better health for all people.

Another change here in Alabama is the meeting of different cultures, as more foreign-born physicians come to this country for training and decide to remain. Their spouses affiliate with the Auxiliary, and bring cultural enrichment; they are eager to learn the ''volunteer way'' of serving in their adopted country. By accepting and understanding individuals from different national and cultural backgrounds, and by working together for common goals, our organization will add a new dimension. They need our support, training and encouragement, as they become accustomed to new ways in a strange land, and we must reach out to them. The privilege to be with people from different parts of the world, and exchange ideas, gives us a marvelous opportunity for growth. They provide a whole new enriching resource that must not be lost.

Fiscal responsibility is another area of concern, as we plan future programs of education and training for a more demanding and sophisticated membership. We must realize that membership programs, with learning opportunities, are most costly. We must encourage membership of those who, due to home or career responsibilities, have no time for service or attending meetings but can play a vital role by providing financial support. The Auxiliary cannot function properly in the future without these providers.

Tapping All Resources

If the Auxiliary is to continue to grow and provide the kind of organization that will be more effective in the future, we must tap all resources, research needs of both community and membership, and by careful planning, find the correct balance for all concerned. We must not ever be a voice in the wilderness but a concert of concerned citizens who can make a difference. The light at the end of the tunnel can become as bright as we wish it to be, providing new lustre for the profession we love and cherish.

To reach our full potential, we must have positive attitudes, strong leadership, determination, a willingness to affect change and a strong desire to grow. We must maintain a fresh and inviting organization in which our members can find their true worth as individuals. By joining together at all levels and as we face future challenges, our organization's role in the voluntary sector will become ever stronger and more encompassing. We must pursue excellence as we seek new horizons and face future challenges.

Patty

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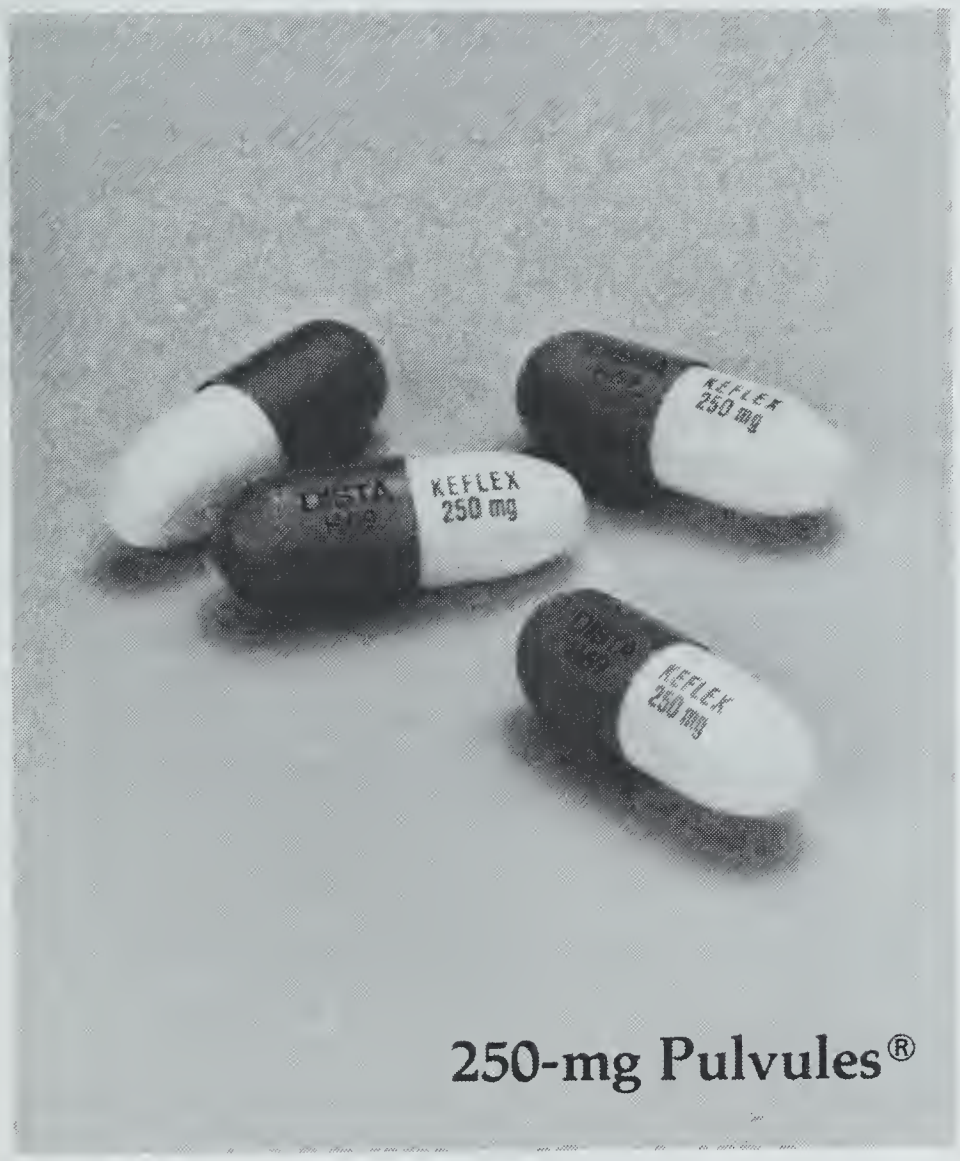
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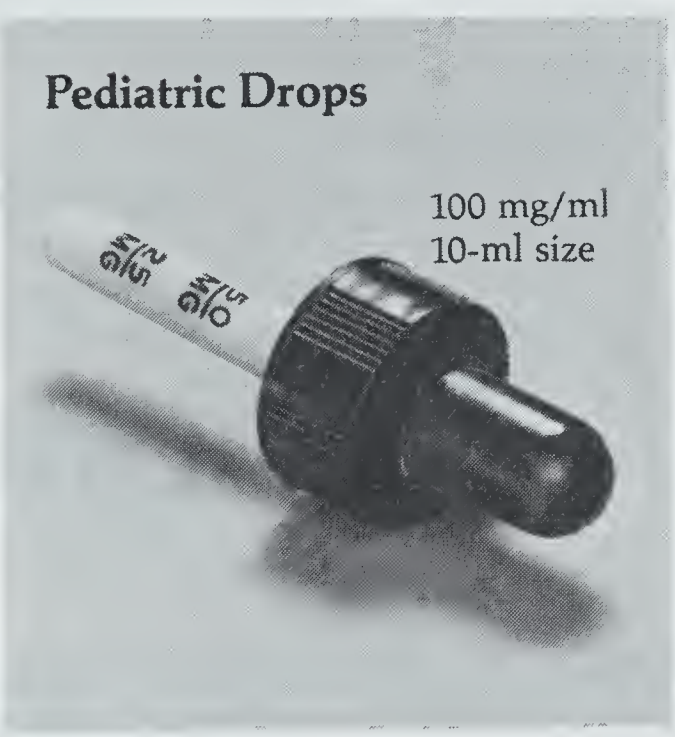
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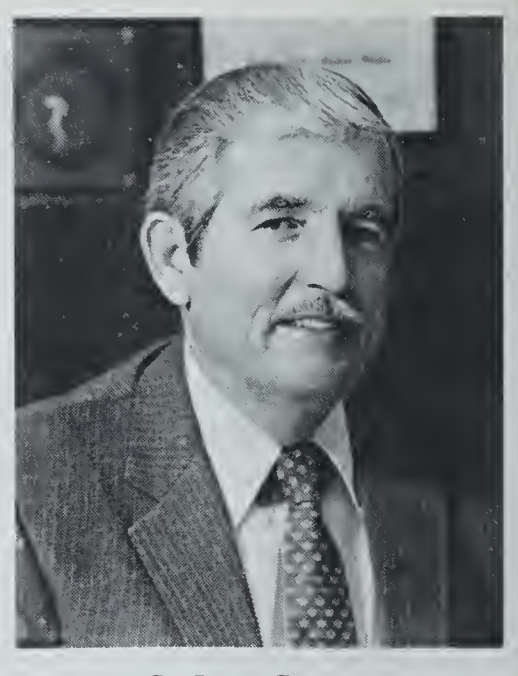
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For Whom the Bell Tolls

If there is one single consensus in all the debate over the causes of spiraling health care costs, that would have to be that cost-plus reimbursement is one of the villains of the piece.

Congress certainly thinks so. A few weeks ago it enacted the Medicare Prospective Reimbursement bill, which establishes (or attempts to establish) an entirely new philosophy: that charges shall be based on a new theory bottomed on faith in Diagnostic Related Groups. The House favored it by a decisive 5 to 2 margin, the Senate by more than 4 to 1.

Conventional wisdom at this writing is that this should reduce the government's medical bills, but nobody really knows. Since the measure is designed for that purpose only — to save money, not to improve quality of care — the experiment is before us.

American hospitals, casting about for ways of surviving the crunch, have proposed two measures that Senator David Durenberger, chairman of the Senate Finance Committee's health subcommittee, says stand no chance of congressional approval.

The American Hospital Association wants authority for the hospitals to charge Medicare beneficiaries for any amount beyond the Medicare payment rate. That will never pass Congress, the Senator says; nor, in his judgment, will a plan to base a hospital's future payments on its past costs.

Finally, Durenberger said, Congress will not pass a prospective pricing plan applying to all payers. Commercial health insurers want this as protection against cost-shifting.

Then the Senator gave the game away, saying that prospective pricing is an interim step in the consolidation of Medicare payment into "one lump sum for hospital and physician care."

If this is indeed the goal of current thinking in Washington, the bell tolls for fee-for-service in federally funded medicine, giving substance to the fears of many physicians all along that federal medicine would, sooner or later, go straight for the heart of independent practice.

All the smoke hasn't cleared from the prospective reimbursement battlefield. But some are saying that the big winners, ultimately, will be the for-profit hospital chains. Wall street has been smiling on them in recent years, and the latest turn of events has not depressed their stock. An Editorial in *Health Services Information,* a weekly report on health policy out of Washington, commented in the week that prospective reimbursement was passed: "Some even say for-profits will take over most of the hospital industry."

But the same editorial points to an opposite view, with its own set of supporters: that non-profits have been losing out under cost-based reimbursement because of their relative inefficiency compared with the for-profits. Therefore, this possibility: that prospective reimbursement will substantially improve the management effectiveness of non-profits, making them bigger net gainers over the long haul than for-profits.

But the dominant thinking seems to be that it will take the non-profits years to develop the expertise demanded by the new legislation. For-profits, for the short term at least, will be helped more, the theory goes, particularly the large chains with their access to capital markets, their economies of scale evident in quantity buying and overall planning, and so on.

Time will tell. But what is unclear to hospitals is becoming increasingly clear to physicians: if Washington is bound and determined to buy, at a set unit price, a doctor-hospital package, both for-profit and non-profit hospitals will be encouraged to own *all* the package, the doctor as well as the hospital.

Unless this speculation is wildly awry, there is likely to be a sharp growth in the number of hospital-based physicians in the months and years ahead.

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WARNINGS: ASPIRIN: Use salicylates with extreme caution in patients with peptic ulcer, asthma, coagulation abnormalities, hypoprothrombinemia, vitamin K deficiency, or those on anticoagulants. In rare instances, aspirin in persons allergic to salicylates may result in life-threatening allergic episodes.

MEPROBAMATE: DRUG DEPENDENCE: Physical and psychological dependence, and abuse have occurred.

Chronic intoxication from prolonged ingestion of, usually, greater than recommended doses is manifested by ataxia, slurred speech, and vertigo, Therefore, carefully supervise dose and amounts prescribed and avoid prolonged use, especially in alcoholics and others with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of preexisting symptoms, e.g. anxiety, anorexia, or insomnia, or withdrawal reactions, e g , vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and, rarely, convulsive seizures. Such seizures are more likely in persons with CNS damage or preexistent or latent convulsive disorders. Onset of withdrawal symptoms occurs usually within 12 to 48 hours after discontinuation; symptoms usually cease within next 12-to-48-hour period. When excessive dosage has continued for weeks or months, reduce dosage gradually over 1 to 2 weeks rather than stop abruptly. Alternatively, a short-acting barbiturate may be substituted, then gradually withdrawn.

POTENTIALLY HAZARDOUS TASKS: Warn patients meprobamate may impair mental or physical abilities required for potentially hazardous tasks, e.g., driving or operating machinery.

ADDITIVE EFFECTS: Since CNS-suppressant effects of meprobamate and alcohol or meprobamate and other psychotropic drugs may be additive, exercise caution with patients taking more than one of these agents simultaneously.

USAGE IN PREGNANCY AND LACTATION: An increased risk of congenital malformations associated with minor tranquilizers (meprobamate, chlordiazepoxide, and diazepam) during first trimester of pregnancy, has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. The possibility that a woman of childbearing potential may be pregnant at time of institution of therapy should be considered. Advise patients if they become pregnant during therapy or intend to become pregnant to communicate with their physicians about desirability of discontinuing the drug.

Meprobamate passes the placental barrier. It is present both in umbilical-cord blood at or near maternal plasma levels and in breast milk of lactating mothers at concentrations two to four times that of maternal plasma. When use of meprobamate is contemplated in breastfeeding patients, consider the drug's higher concentrations in breast milk as compared to maternal plasma levels.

USAGE IN CHILDREN: Keep preparations with aspirin out of reach of children. Equagesic®-M is not recommended for patients 12 years of age and under.

PRECAUTIONS: ASPIRIN: Salicylates antagonize uricosuric activity of probenecid and sulfinpyrazone. Salicylates are reported to enhance hypoglycemic effect of sulfonylurea antidiabetics.

MEPROBAMATE: Use lowest effective dose, particularly in elderly and/or debilitated, to preclude over-sedation. Meprobamate is metabolized in the liver and excreted by the kidney; to avoid excess accumulation exercise caution in its use in patients with compromised liver or kidney function. Meprobamate occasionally may precipitate seizures in epileptic patients. It should be prescribed cautiously and in small quantities to patients with suicidal tendencies.

ADVERSE REACTIONS: ASPIRIN: May cause epigastric discomfort, nausea, and vomiting Hypersensitivity reactions, including urticaria, angioneurotic edema, purpura, asthma, and anaphylaxis may rarely occur. Patients receiving large doses of salicylates may develop tinnitus.

MEPROBAMATE: CNS: Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impairment of visual accommodation, euphoria, overstimulation, paradoxical excitement, fast EEG activity.

GI: Nausea, vomiting, diarrhea.

CARDIOVASCULAR: Palpitation, tachycardia, various forms of arrhythmia, transient ECG changes, syncope, hypotensive crisis.

ALLERGIC OR IDIOSYNCRATIC: Milder reactions are characterized by itchy, urticarial, or erythematous maculopapular rash, generalized or confined to the groin. Other reactions include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy, fever, fixed drug eruption with cross-reaction to carisoprodol, and cross-sensitivity between meprobamate/mebutamate and meprobamate/carbromal. Rare, more severe hypersensitivity reactions include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, and anuria. Also, anaphylaxis, exfoliative dermatitis, stomatitis, and proctitis. Stevens-Johnson syndrome and bullous dermatitis have occurred.

HEMATOLOGIC (SEE ALSO "ALLERGIC OR IDIOSYNCRATIC"): Agranulocytosis, aplastic anemia have been reported, although no causal relationship has been established, and thrombocytopenic purpura.

OTHER: Exacerbation of porphyric symptoms.

DOSAGE AND ADMINISTRATION: Usual dose is one or two tablets, 3 to 4 times daily as needed for relief of pain when tension or anxiety is present. Not recommended for patients 12 years of age and under.

OVERDOSAGE: Treatment is essentially symptomatic and supportive. Any drug remaining in the stomach should be removed. Induction of vomiting or gastric lavage may be indicated. Activated charcoal may reduce absorption of both aspirin and meprobamate. Aspirin overdosage produces usual symptoms and signs of salicylate intoxication. Observation and treatment should include management of hyperthermia, specific parenteral electrolyte therapy for ketoacidosis and dehydration, watching for evidence of hemorrhagic manifestations due to hypoprothrombinemia which, if it occurs, usually requires whole-blood transfusions. Suicidal attempts with meprobamate have resulted in drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Some suicidal attempts have been fatal. The following data, reported in the literature and from other sources, are not expected to correlate with each case (considering factors such as individual susceptibility and length of time from ingestion to treatment), but represent usual ranges reported. Acute simple overdose (meprobamate alone): Death has been reported with ingestion of as little as 12 gram meprobamate and survival with as much as 40 gram.

BLOOD LEVELS:

0.5-2.0 mg percent represents usual blood-level range after therapeutic doses. The level may occasionally be as high as 3.0 mg percent.

3-10 mg percent usually corresponds to findings of mild-to-moderate symptoms of overdosage, such as stupor or light coma.

10-20 mg percent usually corresponds to deeper coma, requiring more intensive treatment. Some fatalities occur.

At levels greater than 20 mg percent, more fatalities than survivals can be expected.

Acute combined overdose (meprobamate with other psychotropic drugs or alcohol): Since effects can be additive, history of ingestion of a low dose of meprobamate plus any of these compounds (or of a relatively low blood or tissue level) cannot be used as a prognostic indicator.

In cases of excessive doses, sleep ensues rapidly and blood pressure, pulse, and respiratory rates are reduced to basal levels. Any drug remaining in stomach should be removed and symptomatic treatment given. Should respiration or blood pressure become compromised, respiratory assistance, CNS stimulants, and pressor agents should be administered cautiously as indicated. Diuresis, osmotic (mannitol) diuresis, peritoneal dialysis, and hemodialysis have been used successfully in removing both aspirin and meprobamate. Alkalinization of the urine increases excretion of salicylates. Careful monitoring of urinary output is necessary, and caution should be taken to avoid overhydration.

Relapse and death, after initial recovery, have been attributed to incomplete gastric emptying and delayed absorption.

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PRESIDENT'S PAGE



H. Hamilton Hutchinson, M.D.
President, MASA

The 11th Hour

I have contemplated my year as President of MASA with considerable respect since the magnificent job done by recent past presidents is both humbling and challenging. I am certain that each new President has interpreted the problems facing his term as reaching near crisis proportions, but I think that this year it is realistic to believe that this appraisal is not greatly exaggerated.

I believe that mounting criticism of the medical profession and the simultaneous escalation of health care costs are related phenomena. Because of the urgency of these subjects, I have solicited anonymous articles on the subjects to be published in the JOURNAL this year. The first begins on page 14.

Medical costs have increased ten-fold in the past two decades, and now make up 10% of the GNP. If allowed to continue at this rate, 20% of the GNP will be consumed by health care before 1990. Industry, which in the past has acquiesced to Labor's demands, now recognizing that more is spent on health of its employees than on its principle raw material, steel, in the manufacture of autos, is demanding a change.

The federal government through HCFA has instigated new methods of reimbursement. Others can be anticipated, since 35% of the $287 billion of the 1982 health bill was paid to hospitals, this segment including hospital based physicians is receiving the initial principal attention. HMOs, PPOs, DRGs (diagnosis related groups, perspective reimbursement) require changes with which few if any of us have dealt.

That changes must be made seem indisputable. Dr. Robert Rubin, Assistant Secretary for the HHS, has said that if government regulation is the only way, then government regulation it will be. Alex McMahon, President of AHA, says, "The message I get from government and industry is that present costs are intolerable," and costs are going to be decreased "one way or the other."

Edwin Meese, White House Counselor, says that health care costs are "one of the most serious" problems facing the public and the federal government. Surveys of public opinion show that the people, though still pleased with their medical care, are disturbed over the cost and are anxious to reduce it — they are willing to accept a new system of delivery.

Many of you are aware of the results of the Capstone Poll last year. It showed that our patients here in Alabama were more disturbed than they tell us in the office and in the hospital about costs. And that though they prefer the present system, a national health system would be acceptable if necessary to contain costs.

With whatever changes come, we must remain as our patient's advocate and insist that what be done, be done without reduction in quality of care.

I am enthusiastically convinced that we as physicians having some voice in the control of 70% of health care costs, can significantly reduce costs without compromizing quality. I feel certain that you have the same confidence.

continued on page 28

Preacher of the New Gospel

By William H. McDonald

The 1982-83 president of MASA is a born-again cost-containment evangelical who preaches a fundamentalistic sermon he knows his congregation may grow tired of hearing. The sermon is this:

Physicians must, by concerted action now, substantially reduce the cost of medical care by their own actions and leadership, or lose the opportunity and, with that loss, the control over the private practice of medicine.

H. Hamilton Hutchinson, M.D., Montgomery internist, thinks that up until now physicians have done much as Mark Twain said of the weather.

Dr. Hutchinson's formula for professional salvation is simplicity itself: every physician should pretend, for purposes of signing orders and otherwise directing medical care, that the patient has 75% insurance coverage. That is to say, the patient will have to pay one dollar in four.

While the idea of co-pay has been around for some time, the underlying theory has been to put the patient at risk in utilizing services. It is Dr. Hutchinson's basic preachment that, while good, this is misplacing the proper emphasis. He wants the doctor to place *himself* at risk in ordering drugs, tests and hospitalization:

"I can remember when I started practice (1949) people simply didn't have the money or the insurance, not like today. If you went to the hospital and had an operation, that was covered. But anything out of the doctor's office was slap out of the patient's pocket.

"If a sulfa drug was as good as a shot, you prescribed the sulfa drug. If a follow-up phone call next week was as good as coming back to the office, you told the pay patient to do that. People wanted to do that. And it was a lot cheaper."

Dr. Hutchinson is not on a nostalgia trip to the good old days, but is convinced that the standard assumption that the patient will have to pay 25% of any bill is the only way the physician will feel constrained at all times in what he orders.

"If you say 50%, you might leave off a CAT scan somebody might need. But if it's only 25%, and you thought he really needed the CAT scan, you'd let him bite the bullet."

If every physician in Alabama started doing this today, Dr. Hutchinson is convinced, it would result in an annual reduction of the total state medical bill of 15 to 20%.

But, if his idea is to work, he insists, it would require something very close to unanimity in the profession.

"Everybody has got to do it. If there are two orthopedists in a hospital, for example, and one keeps all his hips in three weeks and insists they have a private room because they get better nursing care, and the private rooms with the monkey bar are the very best in town, his results are going to be good, no question about that. They might be a little bit better than those of the other orthopedist, who is a little bit more practical, particularly in the case of all those people who are

replacing hips on Medicare now, and who tries to cut down the hospital stay and all the frills.

''The hard-nosed guy, the cost-conscious orthopedist, is going to lose out in this situation to the other fellow to whom the sky is the limit. So both must take the position of economy in medicine, or neither can.

''This will not degrade the quality of medicine. We used to do this, all of us did. A generation ago, doctors were not only scientists but they were leaders. They were persuasive, and they put a little bit more of themselves into a family. They would say, for example, 'You can handle this at home. Just because there is nobody to pick you up tomorrow, you can still do it.'

''So it harks back to co-pay. The patient and the physician both need some stimulus to make them cost conscious. That is why I believe that every physician must assume, if we are to succeed in bringing costs down, that each patient is financially involved in a meaningful way with the doctor's orders.''

Not Born to Medicine

Henry Hamilton Hutchinson did not plan to study medicine when he graduated from Montgomery's Sidney Lanier High School in 1938. He had his cap set for business. His school-teacher mother probably wanted him to be a preacher, although she didn't bear down on it, because his father had been a preacher.

The switch to medicine came about as a result of his mother's chance encounter with the headmistress of an exclusive, progressive education school in Greenwich, Connecticut.

One thing led to another, and the headmistress invited Hamilton and his brother John to attend Edgewood Preparatory School, attended mainly by rich children from divorced families.

The theory of the school, new at the time, was to let the children shape their own careers. To this end, a broad mix was provided in the student body, with scholarships provided to insure that. Hamilton Hutchinson's classmates, for example, included ''a roughneck from the Bronx,'' another uncut diamond from Manhattan, a boy from Virginia, etc. This supporting cast, of which he was one, was supposed to give the rich students a better slant on the real world.

One boy was interested in astronomy and devoted his time to building a telescope, learning all about the history and science of telescopes. If a student wanted to be a newspaperman, he could work in a print shop for starters. And so on.

Hamilton took speedwriting, typing, math and English, along with the history of art, for some reason (''the only time I ever learned anything about art'').

But Edgewood first demonstrated to him that it was possible to go to school as long as he wanted to; there was always a way. After his year at Edgewood, in which he learned ''mainly about New York City,'' he enrolled in Business School, as planned, at the University of Alabama at Tuscaloosa.

About this time, however, it occurred to him that some of his earlier business heroes — the Mellons, Rockefellers and the steel giants — were not all that straight in their dealings.

He switched to pre-med in 1939, entering the two-year medical school at Tuscaloosa in 1941, transferring to Washington University in St. Louis in 1942, where he earned his M.D. degree in 1944.

He interned at the Navy's mainside hospital, Pensacola. Discharged in 1946 with two years of active duty in the Navy, he found that all residency programs were booked solid, coast to coast, for at least three years. But he had met a man in the Navy who was a professor at the University of Louisville and pulled strings to get him appointed to a residency there.

The hospital in Louisville was chiefly cardiovascular. Until the ''real cardiologists'' came along in Montgomery, his practice was largely in that field.

With a wife and two children in the early 50s, he has settled into a practice routine in Montgomery. But the Navy had other ideas when the Korean War broke out. His reserve number was called up and he spent 1953 back in the service. Except for that one year, he has practiced in Montgomery since 1949.

The family is now six children, two boys and four girls, aged 25 to 35. The oldest son is a tax lawyer. The youngest had a fling at naval aviation and parlayed that career, and an earlier interest in oceanography, into his present job as head of the bioscience department of a deep-water company under contracts to the Navy to study currents and retrieve missiles and torpedoes from the ocean floor using trained porpoises and whales. The company is now engaged in a new method of energy development based on thermal gradients in deep oceans.

For a time, the family thought this son was going to be the black sheep. After discharge from the Navy, he bummed around Hawaii, sailed his own boat thousands of miles to Tahiti, lived there three months, sailed back, then spent awhile job-hunting around Hawaii, not very seriously, before finding his niche in oceanography. He is married to a lady with similar tastes, who is working on her master's in economics to assist her in her field of labor negotiation. She is expecting.

Dr. Hutchinson allows that he has learned more from his children than he taught them. For example, his oldest son, the tax attorney, has taught him the intricacies of the tax laws and contract law.

The oldest daughter is married to an attorney, another to a resident in medicine at UAB, another has a college degree in recreation, and another is a Physi-

cian's Assistant with a Montgomery family practice group specializing in nursing home care.

Dr. and Mrs. Hutchinson are ''proud to the point of being vain'' about their children. That has been his principal interest outside medicine, he says. He also plays tennis with some regularity and has begun to hunt again after a three-year lay-off because his ear doctor in Memphis told him to quit. ''I have some real good muffs now, and I try to wear them,'' Dr. Hutchinson says with a cryptic smile that suggests he realizes he is not following doctor's orders precisely.

Although Dr. Hutchinson emphatically rejects and condemns HCFA's attempts to introduce a second tier of care by reducing quality, he nonetheless believes that it is possible, and practical, to have a second tier that would not diminish quality but would eliminate frills and waste. In short, a good grey Chevrolet instead of a white Cadillac loaded with options, or HCFA's Edsel.

The following question and answer is devoted mainly to the announced theme of Dr. Hutchinson's presidency — a last chance for physicians to impose meaningful cost containment. Dr. Hutchinson thinks it is not too late but is ''about 10:50 on the clock.'' To which he adds: ''I think that if we haven't already killed the goose that laid the golden egg, we are in the process of doing that.''

Q. *What is the principal problem facing medicine and MASA currently?*

A. ''Until recently, I had felt it was how we could accomplish cost containment, on our own. Now it is how we can best accomplish this interacting with one of the new methods designed for this purpose, such as PPO, DRG, IPA, etc.''

Q. *You say you had hopes for voluntary cost containment, do you think it is too late?*

A. ''As a self-starter or entirely voluntary program, probably so. Otherwise we will, at times by regulation at other times by cooperation or imagination, accomplish a significant reduction in cost. Or, expressed another way, under one of these programs we will be encouraged, manipulated, or by edict forced to practice in a more cost-effective manner — it changes that we could have accomplished or done voluntarily.''

Q. *You make it sound as if doctors are responsible for the high costs.*

A. ''By saying that we could reduce cost voluntarily, I suppose I do. But certainly we are accredited with this state of affairs in that by initiating or ordering the hospital admission, diagnostic aids, treatments, procedures, etc., that result in 70% of the $281 billion spent on health care. Yet we really are not responsible. Look at the reasons for the 10-fold increase in the last 20 years!''

Q. *What are these reasons?*

A. ''The whipping boy now is the cost-plus system of reimbursement to hospitals. Physicians didn't design that formula with the glaring lack of incentive to limit costs. One of the new alphabets, especially the DRGs, will change this. But cost-plus reimbursement is not the sole cause. Inflation in general, increasing therapeutic capabilities and technological advancements, government mandated benefits and restrictive regulations, the emphasis on paying for procedures rather than cognitive services, the aging population, increasing malpractice costs and expensive litigations, a perception on the part of many that in-patient care is higher quality than out-patient care, and the very significant but hard to measure cost of unhealthy, destructive lifestyles — all have been factors.''

Q. *What can be done about these causes?*

A. ''Some can be prevented, some can be amended, some we are really indeed proud of and would not like to change — for example, increasing technological capabilities and the ever-lengthening life span. In fact this leads to another question that consumers and not physicians must answer. Namely, is 10% of the GNP too much to pay for the best health care delivery system in the world?''

Q. *Then what is the answer?*

A. ''I think our goal must be to stop, or at least significantly slow, the rate of escalation of cost which by the year 2000 would reach 20% of the GNP. This can be done by making changes without compromising quality, if these changes are made with significant input from physicians.''

Q. *Well, can you be specific? What are some examples?*

A. ''I'll try. First each individual physician must agree that such a reduction in total cost is a necessity and that it must be accomplished quickly or fee for service is gone. Then each physician must analyze and amend his habits. For example, I think a good tool to exercise would be for each doctor before ordering a hospital admission, an ECF admission, a diagnostic study of procedure, or a mode of treatment, to ask yourself:

''Would I order this for my patient were he going to have to pay a significant portion of the cost? Expressed another way, will this order be likely to alter my diagnosis or treatment; or more importantly, the eventual outcome to my patient. Or am I being influenced by what someone else thinks — that is, a colleague, a consultant, the house staff, the nursing staff, audit committee, or the family?

''I don't mean that limiting costs has to be a goal on par with the patient's recovery or comfort, but yet, at the same time, must be an integral part in our thought processes.

''Prior to each hospital admission we must ask ourselves, Can this procedure be done as an out-patient? Early on this will be foreign to our habits. Until recently breast biopsies, bronchoscopy, D&Cs, were customarily in-patient procedures. Doctors, however,

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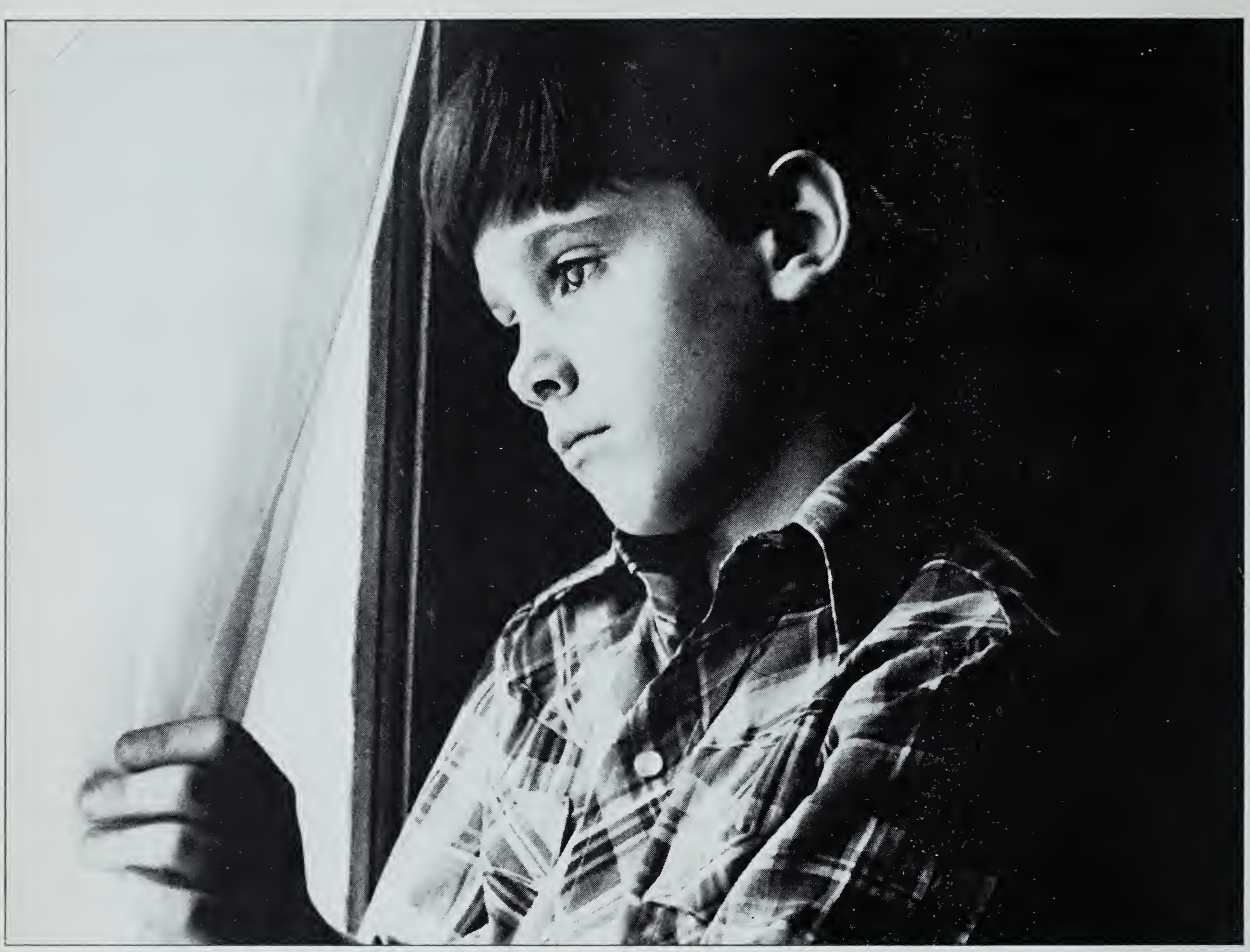
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adapt quickly, witness what we use daily now that was not available 15 years ago. Presented with a patient in the office with weight loss, unexplained weakness, F.U.O., myelalgia, it has become a common routine to admit a patient to the hospital so that the hospital nurse can explain and schedule the studies and where we can amend this subsequent investigation as new findings are reported.

"The reason for this custom is well known. Some of these reasons will be amended by the new programs. Others we will have to amend by altering our habits. A co-worker in our office, ER, or out-patient clinic, can schedule out-patients just as the ward clerk and/or the nurse do for in-patients.

"For those patients for whom admission is essential, we must begin early in the admission to consider alternate routes of discharge planning or subsequent consultation. For example, don't wait until a Friday noon and all studies are completed to ask the surgeon to see him, knowing that he really can't schedule an elective procedure until the first of next week.

"Chemotherapy, radiotherapy, can often be accomplished as an out-patient. Nursing home transfers, which are usually not received on the weekends, can be anticipated with this restriction in mind. Families can be given potential dates of discharge so that their availability will not result in delay. Until recently, the incentive for systematic planning has been very weak.

"Most of the new potential programs, especially PPO, DRG, are going to insist on out-patient surgery, prompt discharge for those patients admitted, and in general are going to make it actually easier for us to explain to our patients and families. I think we have all witnessed occasions when the PSRO role was a helpful lever to encourage a family to encourage a timely discharge. References to the regulations, the feds, the committee will make convenient whipping boys."

Q. *So far, you sound optimistic, even simplistic, as though all the docs are good guys and should have no blame for what is termed a crisis. Don't you have a criticism for your doctor colleagues?*

A. "You are right, we are in part responsible. We have succumbed to the system. I am sure that all doctors witness habits in themselves and in others that should be changed."

Q. *What are some of your pet peeves?*

A. "Sometimes it's hard to limit it to a few, but for starters I'd say by doing too much too late. Pneumonia used to be termed the great emancipator. Well, we've about licked that and we now wait until a rhythm is more overwhelming: sepsis, azotemia, hypoxia, hemorrhage.

"Sometimes we don't give up easily, and though it was clearly evident 10 days prior, it is not until the oxygen, steroids, transfusions, multiple antibiotics, pacemakers, dialysis, chemotherapy have been exhausted that peace is finally brought to the patient and his emotionally depleted family.

"In the same vein I think it is senseless and wasteful and really inconsiderate of the family's feelings to keep a no-code in an intensive care setting. Improper use of prophlyatic antibiotics not only are expensive and wasteful but are painful and often sensitizing.

"Routine orders save the doctor but cost the patient. Every suspected MI doesn't need Stat and BID enzymes, EKGs daily times 3. A bronchoscopy into bronchial malignancy is clearly evident in biopsies but for completeness doesn't have to have, in addition, AFB cultures times 3, fungoserology, cytology on the washings.

"$4 billion a year is spent on respiratory therapy, yet we still see standing orders for post-op IPBB and continued similar procedures long after they have served their usefulness. I'm sure all of us could add 10-fold to this list.

"The reason for pointing these out is not to be critical but to emphatically stress that we must reduce costs, we must be prepared to accept changes from the hospital, from industry, and other third-party payers. We must be prepared to accept some changes in our own practice habits and customs on the one hand, without compromising quality of care on the other.

"I'm convinced that we can do all of this and still enjoy one of the most rewarding of all professions." ⊡

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Why Patients Are Angry

Following is the first article of a series drawn from anonymous letters solicited by H. Hamilton Hutchinson, M.D., MASA President, in his effort to find what is wrong with medicine, and what can be done to contain costs, as seen by the patient, by physicians, by allied medical personnel, and by others in the business and professional community.

In his initial President's column in this issue, Dr. Hutchinson explains the background of the articles. The article to follow, from the patient's viewpoint, was put together from letters he received, and from other comments heard or read in the past few months.

The Capstone Poll published in the JOURNAL last September revealed that almost three-fourths of all Alabamians believe physicians make too much money.

A smaller percentage, but still more than half of those polled, said physicians are "more concerned about making money than they are with the welfare of their patients."

This attitude, which may or may not come as a surprise, perhaps accounts for another finding by the University of Alabama pollsters — that about two-thirds of all Alabamians would be willing to have their routine illness "treated by a nurse or doctor's assistant rather than by a doctor" as an economy measure.

About half would as soon go to a clinic as to a physician's office.

These and similar national polls illustrate the shifting ground underneath medicine, once regarded as near the top of the most respected professions. A Birmingham physician comments:

"For many years, the profession ranked just below the ministry in public esteem. Now it's down to about fifth place. The perception [is] that we are greedy, that the primary objective of most physicians is money.

"I am totally in favor of doing away with Medicaid. One of the things we used to have in our favor was taking care of the poor. If we went back to that, it would enhance our image more than anything.

"I think the public can tolerate physicians making $100,000 a year if they took care of the poor. Instead, what the public sees is Medicaid eating the general fund alive. In the public's eyes, doctors don't 'do good work' anymore."

It is this public perception, the physician concluded, that is a major factor in the size of jury awards in medical malpractice cases — "an opportunity to fight back."

Physicians may be among the last to feel the brunt of this perceived rising public indignation. Their patients say little face to face. From what comment many doctors hear in the circles in which they move, this situation does not seem grave, some say. This could be a fool's paradise. Southerners, more than most Americans, are by nature courteous and do not go out of their way to tell the emperor he has no clothes.

Behind the cold figures of the polling statisticians are real human beings. When Capstone tells us that, as of 1982, one-half of all Alabamians do not believe they

are getting all the health care they need because the cost is prohibitive, that dovetails with the finding of another private poll taken in Birmingham and cited by the physician quoted above.

The pressure for national health insurance, ignored by many physicians since the election of President Reagan, is greater now than ever, the Birmingham doctor believes, because of the disparity between incomes and health care costs.

What convinced him that some form of national health insurance is coming within a few years was an exhaustive, privately subsidized poll showing support for NHI in Birmingham even among Republicans and the well-to-do. The reason is one of desperation, he believes. Health care costs have risen so fast and so high "they just can't stand it — they want the government to take over, and they don't care how much it costs the country."

Almost the identical wording was used earlier by a Montgomery businessman, who just passed his 65th birthday but has no intention of retiring because he loves his work. He describes himself as a Republican for the past 35 years or so, a conservative who thinks Ronald Reagan is much too liberal, but nevertheless a man convinced that federal medicine is the only answer now.

"I never thought I would say that. But people simply can't afford it. I can't afford the outrageous costs. I am distrustful of everything the federal government does but I see no alternative to socialized medicine. I think the doctors brought it on themselves. There isn't much they can do about it now to stop this from happening."

Horror stories abound as never before. One central Alabama lady of frugal nature but limited means, the story goes, had a gynecological problem and had saved $200 for a visit to a recommended physician. He gave her a thorough physical *except* for a pelvic examination. For that, he said, he was referring her to another physician. But his examination cost all she had saved and she had to forego the needed visit to the second doctor.

Such accounts may or may not be entirely true. That may be irrelevant. People *believe* them and eagerly pass them around, to a chorus of amens.

A common thread running through the anonymous letters written for this project is that physician care has become too depersonalized, that doctors do not spend enough time with their patients, and that they are overpaid for what they do. The following is one example:

"My general opinion of doctors is that there is not enough personal care involved in seeing their patients. I think doctors must realize that they can efficiently see only so many people during a given day and must limit their practice accordingly. By that I mean to have a waiting room full of patients sitting there for an hour or more waiting to get in a [treatment room], where they

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INDICATIONS: Prophylactic or therapeutic nutritional supplementation in physiologically stressful conditions, including conditions causing depletion, or reduced absorption or bioavailability of essential vitamins and minerals; certain conditions resulting from severe B-vitamin or ascorbic acid deficiency; or conditions resulting in increased needs for essential vitamins and minerals.

CONTRAINDICATIONS: Hypersensitivity to any component.

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PRECAUTIONS: *General:* Certain conditions may require additional nutritional supplementation. During pregnancy, supplementation with vitamin D and calcium may be required. Not intended for treatment of severe specific deficiencies. *Information for the Patient:* Toxic reactions have been reported with injudicious use of certain vitamins and minerals. Urge patients to follow specific dosage instructions. Keep out of reach of children. *Drug and Treatment Interactions:* As little as 5 mg pyridoxine daily can decrease the efficacy of levodopa in the treatment of parkinsonism. Not recommended for patients undergoing such therapy.

ADVERSE REACTIONS: Adverse reactions have been reported with specific vitamins and minerals, but generally at levels substantially higher than those in Berocca Plus. However, allergic and idiosyncratic reactions are possible at lower levels. Iron, even at the usual recommended levels, has been associated with gastrointestinal intolerance in some patients.

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HOW SUPPLIED: Golden yellow, capsule-shaped tablets—bottles of 100.

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*Shils ME, Randall HT: Diet and nutrition in the care of the surgical patient, chap. 36, in *Modern Nutrition in Health and Disease*, edited by Goodhart RS, Shils ME; Philadelphia, Lea & Febiger, 1980, p. 1084.

Please see summary of product information on reverse page.

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can wait longer, is not giving their patients the utmost personal care.

"I feel doctors should be much more concerned about getting the patients in, realizing their problems, and finding a solution, rather than seeing how many patients they can see in a day. . . .

"Overall, I view the doctors that I have been associated with, both in business matters and medical matters concerning myself, to be very compassionate men . . . very dedicated . . . who must give up much of their time with their families. I feel they should be rewarded through monetary means and, in most cases, they are. But we as non-doctors often think of them as being highly overpaid."

From East Alabama, another:

"The profession [of medicine] is viewed more as a business that can afford luxurious living rather than 'using one's self up' in service. From my observation . . . most physicians are the world's worst managers of money . . . cost containment is not a strong point of physicians but it is a major consideration of most of their patients.

"Medical insurance has been and is an enemy of the common man. He can't afford the premium but he can't afford to be without it. As the medical fee escalates, so does the premium.

"Not to be left out, the hospitals see how much they can do to the patient in the name of 'better service.' In reality, it is to pay for all that updated equipment the doctor said was vital to our health.

"The doctors, hospitals, radiologists, therapists, pharmacists and other related professions are racing us toward socialized medicine. . . .

"It is expensive, useless and time consuming to repeat tests on transfer that have been conducted by a competent lab tech. . . . Deal with each patient as though he had no health insurance.

"Perhaps physicians need to improve their image, but more than that they need to improve their care and concern for the total man."

A businessman on his view from above:

"During 1982 my company [spent] approximately $2,500 per employee in the form of health care benefits . . . an increase of 100% since 1976.

"With figures like these, it should come as no surprise that industry is becoming *very* alarmed by the rising cost of health care.

"The rising cost dilemma did not just happen. It has been working insidiously for some time. Therefore, it will not be abated by finger pointing and name calling on the part of physicians, hospital administrators, insurance carriers, and representatives of industry.

"Industry must share the responsibility. . . . In the name of improved benefits, industry has assured more, if not in some cases all, of the employee health care costs over the years through the elimination of deductibles and/or co-pay features. Now industry is trying to

ALL FOR ONE
ONE FOR ALL



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The Three Musketeers
and D'Artagnan

ONE FOR ALL – One tablet treats pinworm in any patient, regardless of age or body weight.* Obviates need to calculate individual dosages.

A single tablet eradicates pinworm in 95% of patients.

*Contraindicated in pregnant women and in persons who have shown hypersensitivity to the drug.

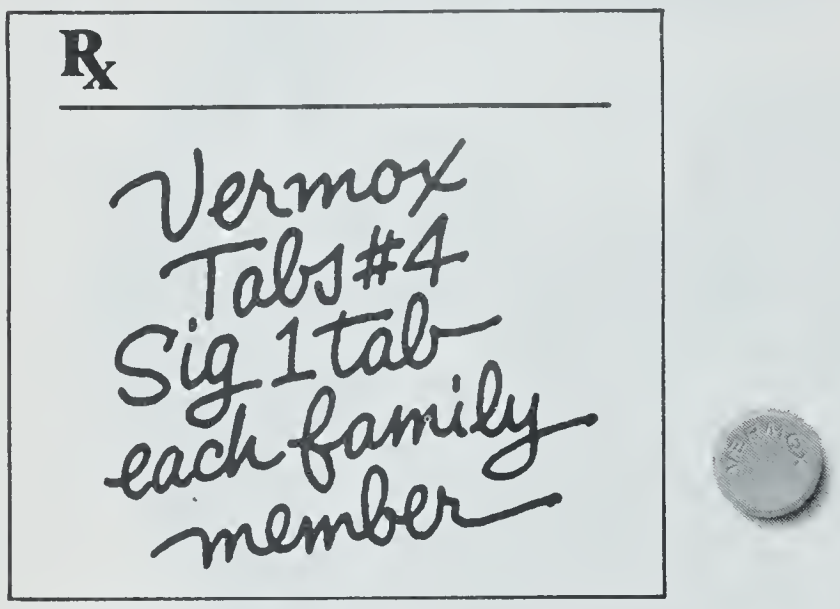
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The #1 anthelmintic for pinworms and many other worm infestations

Please see complete Prescribing Information on adjacent page.

VERMOX® CHEWABLE TABLETS (mebendazole)



DESCRIPTION VERMOX (mebendazole) is methyl 5-benzoylbenzimidazole-2-carbamate.

ACTIONS VERMOX exerts its anthelmintic effect by blocking glucose uptake by the susceptible helminths, thereby depleting the energy level until it becomes inadequate for survival. In man, approximately 2% of administered mebendazole is excreted in urine as unchanged drug or a primary metabolite. Following administration of 100 mg of mebendazole twice daily for three consecutive days, plasma levels of mebendazole and its primary metabolite, the 2-amine, never exceeded 0.03 μg/ml and 0.09 μg/ml, respectively.

INDICATIONS VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (common roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies as a function of such factors as pre-existing diarrhea and gastrointestinal transit time, degree of infection and helminth strains. Efficacy rates derived from various studies are shown in the table below:

	Whipworm	Common Roundworm	Hookworm	Pinworm
cure rates				
mean	68%	98%	96%	95%
(range)	(61-75%)	(91-100%)	—	(90-100%)
egg reduction				
mean	93%	99.7%	99.9%	—
(range)	(70-99%)	(99.5%-100%)	—	—

CONTRAINDICATIONS VERMOX is contraindicated in pregnant women (see Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

PRECAUTIONS *PREGNANCY:* VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

PEDIATRIC USE: The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

ADVERSE REACTIONS Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

DOSAGE AND ADMINISTRATION The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food. For the control of pinworm (enterobiasis), a single tablet is administered orally, one time. For the control of common roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days. If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

HOW SUPPLIED VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets.
VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium.

US Patent 3,657,267
December 1979

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because so much remains to be done.

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JPI-282

reverse the trend, but finds itself blocked by adverse employee reaction to reduced benefits. . . .

"Physicians must become cost conscious of the services they provide. This is not to question the quality of services provided, merely to analyze the delivery method. The amount of insurance a person has should not dictate the nature of the service — i.e., outpatient vs. hospital admission. Only those services absolutely necessary should be provided.

"Physicians claim to be concerned about rising health care costs. They must do more than give lip service to that concern. . . ."

An administrator in higher education, who describes himself as "a lawyer by professional training," has the highest admiration for American medicine and its great progress in the past 25 years, but and he concedes he can only repeat "the most commonplace criticisms" of physicians. The first he believes to be "the depersonalization of modern medical treatment," commenting:

"In a majority of cases, particularly during hospitalization, the 'treatment team' is an efficient and effective delivery system of medical and surgical relief from illness and injury. It is also, far too often, a near degrading experience for the patient and family. There is too little interpersonal exchange and counseling with the typical patient. The hurried visit during rounds, including cursory instructions to the accompanying nurse, without any real opportunity for questions from the patient (often silly questions, I'll admit), contribute to the accompanying isolation and estrangement between the patient and the physician that ought not to be there. The patient feels that he is 'a medical case' that interests the physician and not a person. I'm convinced that this relationship has contributed to a very marked degree to the current proliferation of malpractice suits. . . . The patient's reaction, already a little irritated, is 'sue the bastard' if a mistake occurs."

Several ministers, who hear many patient complaints that the physician might not, comment in a similar vein: too much depersonalization, doctors "making rounds on roller skates," too much emphasis on group practice that deprives people of "*their* doctor," a decline in revealed compassion, etc.

A central Alabama minister, who came to one of the state's larger cities 25 years ago, remarked on the difference between the attitude toward physicians when he arrived and now.

Today, he said, there is so much criticism of physicians and hospitals, he tries to guide conversation away from these subjects when he visits patients and their families. Twenty-five years ago, he says, physicians were uniformly admired and held almost above criticism.

Another pastor:

"The public is becoming less respectful and even cynical about the medical profession. I perceive a noticeable shift, or adjustment, in the minds of many

patients regarding physicians. Once we heard frequent references to physicians as caring, willing to listen, compassionate, personal and 'he hurts with me.' These have been replaced with such words as detached, 'views me as a fee,' impersonal and generally unavailable.

"Patients are generally more sophisticated and capable of entering a dialogue concerning their illness than 20 years ago. They expect and desire participation in the process of their recovery. . . . Implicit trust in medical judgment has shifted. . . . There is definitely an unrest and impatience concerning long and unnecessary delays in office waiting rooms and unproductive days in hospitals awaiting tests.

"There is a difference between having a profession and being a professional. . . ."

An attorney who has systematically refused to take any medical malpractice cases "due to personal dislike of such claims," says:

"The old perception of a medical doctor as a person who chose the medical profession because he wants to help his fellow man has been destroyed. This destruction came about, largely, because of the atmosphere that exists in most of our hospitals.

". . . The call for efficiency and more income has caused a severe problem to develop in the patient-doctor relationship of most hospitals. Many patients feel that during their confinement to a hospital, they are treated as a body rather than a person.

"The warmth and friendliness that once existed . . . has given way to the sterile, non-caring, and cost-minded hospital whose main concern is keeping red ink off the balance sheet.

"Many patients are so upset with the manner in which they are treated by the hospital staff that their desire for revenge for the rude, non-caring and cold-blooded manner . . . becomes an obsession which leads to thoughts and claims of malpractice, which necessitates suing the doctors as well as the hospital. . . ."

A businessman, a stout supporter of American medicine, says "some physicians' fees are leaving the poor and uninsured without proper medical care. . . . A week's stay in any hospital is enough to break a person." He adds:

"People do not, today, take their doctor's word as the final authority, and that is why there are so many seeking second opinions."

A retired university professor in west central Alabama praises the "technological advances" of medicine but deplores what he perceives as the decline in human values:

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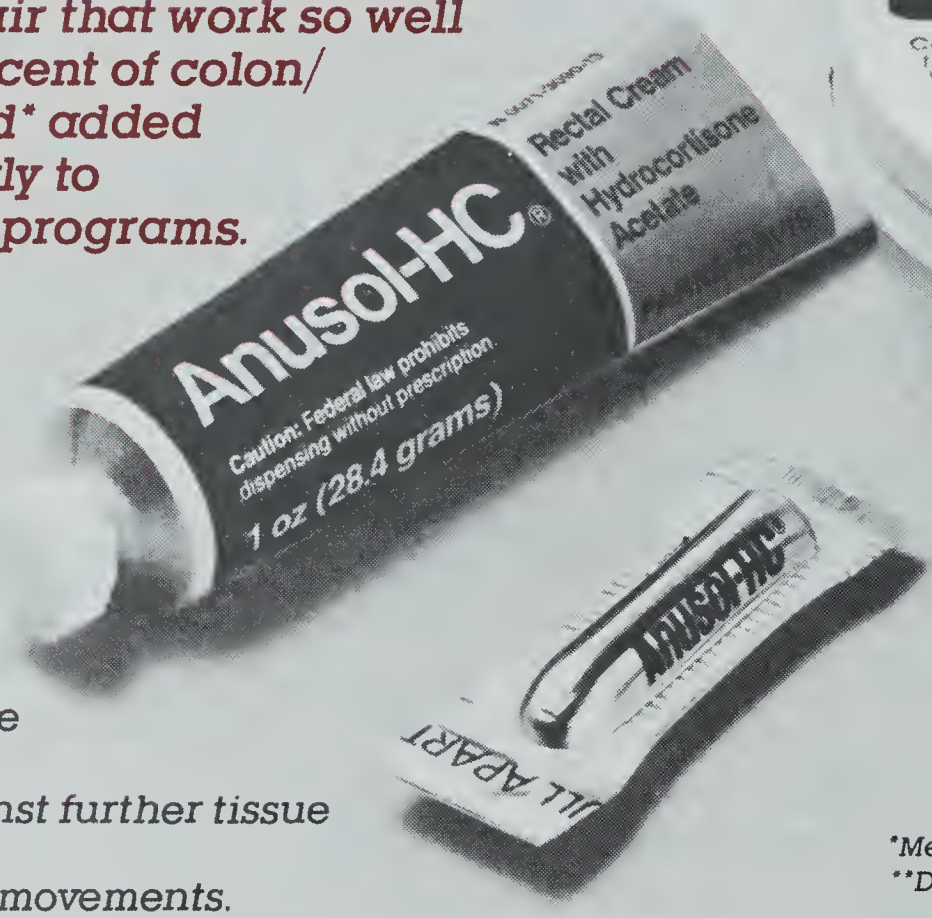
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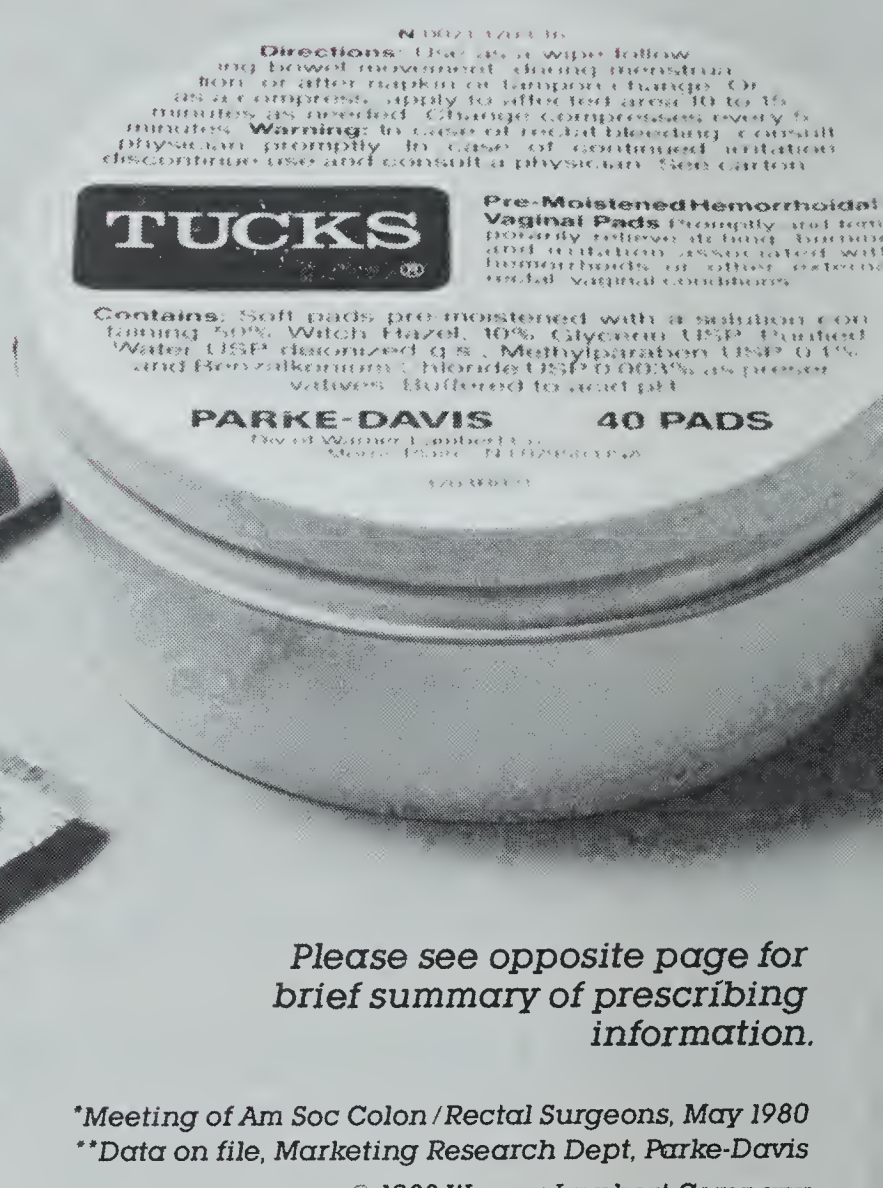


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- ☐ *Antiinflammatory, to relieve itch, pain, and edema.*
- ☐ *Astringent, to protect against further tissue damage.*
- ☐ *Emollient, for easier bowel movements.*

Please see opposite page for brief summary of prescribing information.

**Meeting of Am Soc Colon / Rectal Surgeons, May 1980*
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*The #1 hemorrhoidal** pad for added external relief and gentle cleansing.*

- ☐ *Soothes, cools, comforts, and cleanses irritated anorectal areas.*

Once pain and inflammation subside, for dual action recommend regular ANUSOL® and TUCKS.®

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Morris Plains, NJ 07950

TUCKS®
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Hemorrhoids and other anorectal uses — TUCKS extra-soft cloth pads allow for the gentlest possible application to tender, inflamed, hemorrhoidal tissue. TUCKS are effective cleansing pads for everyday personal hygiene. Used on outer rectal areas, they remove residue that can bring on more irritation. Pads are premoistened with 50% witch hazel, 10% glycerin USP and de-ionized purified water USP which acts as a cooling, soothing lotion to help comfort sensitive anorectal tissue.

Vaginal Uses — Comforting as an adjunct in postoperative care after episiotomies and other vaginal surgery or when relief from vaginal itching, burning or irritation is required.

ANUSOL-HC® SUPPOSITORIES
Hemorrhoidal Suppositories with Hydrocortisone Acetate

ANUSOL-HC® CREAM
Rectal Cream with Hydrocortisone Acetate

Caution: Federal law prohibits dispensing without prescription.

Description: Each Anusol-HC Suppository contains hydrocortisone acetate, 10.0 mg; bismuth subgallate, 2.25% bismuth resorcin compound, 1.75%; benzyl benzoate, 1.2%; Peruvian balsam, 1.8%; zinc oxide, 11.0 mg; also contains the following inactive ingredients: dibasic calcium phosphate, and certified coloring in a hydrogenated vegetable oil base.

Each gram of Anusol-HC Cream contains hydrocortisone acetate, 5.0 mg, bismuth subgallate, 22.5 mg; bismuth resorcin compound, 17.5 mg; benzyl benzoate, 12.0 mg; Peruvian balsam, 18.0 mg; zinc oxide, 110.0 mg; also contains the following inactive ingredients: propylene glycol, propylparaben, methylparaben, polysorbate 60 and sorbitan monostearate in a water-miscible base of mineral oil, glyceryl stearate and water.

Anusol-HC Suppositories and Anusol-HC Cream help to relieve pain, itching and discomfort arising from irritated anorectal tissues. These preparations have a soothing, lubricant action on mucous membranes, and the antiinflammatory action of hydrocortisone acetate in Anusol-HC helps to reduce hyperemia and swelling.

The hydrocortisone acetate in Anusol-HC is primarily effective because of its antiinflammatory, antipruritic and vasoconstrictive actions.

Indications and Usage: Anusol-HC Suppositories and Anusol-HC Cream are adjunctive therapy for the symptomatic relief of pain, itching and discomfort in: external and internal hemorrhoids, proctitis, papillitis, cryptitis, and fissures, incomplete fistulas, pruritus ani and relief of local pain and discomfort following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present After acute symptoms subside, most patients can be maintained on regular Anusol® Suppositories or Ointment.

Contraindications: Anusol-HC Suppositories and Anusol-HC Cream are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparations.

Warnings: The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy, they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

Precautions: General: Symptomatic relief should not delay definitive diagnoses or treatment.

Prolonged or excessive use of corticosteroids might produce systemic effects.

If irritation develops, Anusol-HC Suppositories and Anusol-HC Cream should be discontinued until the infection has been adequately controlled.

Anusol-HC is not for ophthalmic use.

Pregnancy: See "WARNINGS"

Pediatric Use: Care should be taken when using the corticosteroid hydrocortisone acetate in children and infants.

Dosage and Administration: Anusol-HC Suppositories — Adults: Remove foil wrapper and insert suppository into the anus. Insert one suppository in the morning and one at bedtime for 3 to 6 days or until inflammation subsides. Then maintain comfort with regular Anusol Suppositories.

Anusol-HC Cream—Adults: After gentle bathing and drying of the anal area, remove the tube cap and apply to the exterior surface and gently rub in. For internal use, attach the plastic applicator and insert into the anus by applying gentle continuous pressure. Then squeeze the tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days until inflammation subsides. Then maintain comfort with regular Anusol Ointment.

NOTE: If staining from either of the above products occurs, the stain may be removed from fabric by hand or machine washing with household detergent.

How Supplied: Anusol-HC Suppositories — boxes of 12 (N 0071-1089-07) and boxes of 24 (N 0071-1089-13) in silver foil strips with Anusol-HC printed in black.

Anusol-HC Cream — one-ounce tube (N 0071-3090-13) with plastic applicator.

Store between 15° - 30° C (59° - 86° F).
1089G010

"The impersonality of medicine began in the 1940s, when physicians gradually ceased making house calls and expanded when advances in technology led most doctors to stop practicing separately and to combine into clinics with their own laboratories and staff. This led to the doctor-patient communication gap."

The professor and his wife have had experience with some 25 physicians, 100 nurses and several hospitals in recent years, he writes. He speaks of his wife's long stays in the hospitals, when "little was done" and it was impossible to find what, if anything, was wrong with her. Unable to trap the doctor at the hospital, he says, he made an appointment with the physician in his office.

The doctor reviewed his wife's chart and "said she had undergone a personality change — something I have never yet noticed — and mentioned that he had contemplated subjecting her to a physical test so drastic he was reluctant to order it." That, he says, is all he learned.

The professor believes physicians wrongly assume that Americans fear socialized medicine because of their dread of becoming a number, a case, a depersonalized person. The professor says this fear has sharply declined because doctors, hospitals and third parties, with "their incomprehensible computerized replies to correspondence" have already achieved this.

"Ever since the Beveridge Plan was adopted in England 40 years ago, the term 'socialized medicine' has been a dirty word. I have heard and read *ad nauseum* all the arguments — regimentation, deterioration of services, unendurable delays in access to physicians and surgeons, excessive costs, snarls of bureaucratic red tape, etc.

"None of these arguments convinces me, because almost every nation in the civilized world affords through taxation, access to medical care for *all* the residents — not just the elderly and excessively poor — so that worry about hospital bills, doctor bills, dentist bills and enormous drugstore charges virtually ceases to exist."

The professor was particularly outraged by AMA efforts last year "to persuade Congress to exempt physicians from all regulation by the Federal Trade Commission," commenting:

"Activities such as this — and direct contributions by the AMA and its individual members of millions of dollars to promote the election of cooperative legislators — contribute to the image of the medical profession as rich and greedy and arrogant and omniscient." ⊡

Current Practice Characteristics and Distribution Patterns of Alabama Physicians

William R. Willard, M.D.*
Elizabeth R. Ruben, M.D.*
Harry J. Knopke, Ph.D.*

Recent studies have indicated that the United States may soon have a surplus of physicians and may currently be training too many.[1-3] Other studies have suggested that, on a macro level at least, the country's problems of physician maldistribution are being addressed by economic market forces that cause changes in physician practice location decisions.[4-5]

Until recently it was generally acknowledged that Alabama was short in many categories of health manpower, including physicians, that a geographic maldistribution of physicians existed among rural and metropolitan areas, and that the right mix or proportion of physicians, distributed among the various specialties, had not been achieved so as to provide optimal medical care for the people of the state.

In light of the results of recent national studies and the current experience of other states and cities, however, questions have been raised as to whether Alabama, too, is about to experience a surplus of physicians and find its related shortage and distribution problems largely resolved. Answers to these questions bear a large number of implications for health manpower policy that affect all levels of health care delivery, from medical education programs to the nature of individual physician practices.

A large variety of factors relating to numbers and distributions of physicians should be considered when health manpower policy is developed at the national and state levels, among them the adequacy of medical services in cities and towns of different sizes,[6] the distribution of other health workers, the productivity and working hours of physicians according to location, the geographic distribution of illness, and the mobility of patients.[7]

Despite the need for such considerations, the prevailing impressions held by many physicians, much of the public, and by many public policy makers are that a surplus of numbers of physicians is imminent and that, in a time when economic recession is causing retrenchment in most other areas, the most appropriate immediate actions are to cut back on medical education programs to curtail the future supply of physicians, and to alter reimbursement mechanisms to effect ''economies'' in current medical practice.

Before such action is taken at both the federal and state levels, however, valid and accurate data describing all the factors associated with physician supply and distribution are needed. Such data are currently not available, although the need for them is particularly acute at the state level where, in the absence of locally relevant data, policy decisions are likely to be made on the basis of national studies and recommendations.

The purpose of this study was to determine the extent to which the current distribution of active physicians in Alabama compared with nationally accepted recommendations and projections of future physician need. The study was conducted with the recognition that number of physicians is but one of many factors constituting the multifaced problem of providing adequate health services for the state's population, albeit a factor that has gained much notoriety lately.

* The University of Alabama.

The results of the study are presented in two parts: the first describes some of the current practice characteristics and distributions of Alabama physicians, while the second projects the future supply of physicians in the state.

Method

Data supplied by the State Health Planning and Development Agency (SHPDA) and its *Alabama Health Manpower Statistical Series* provided the basis for calculating physician distributions in the state. SHPDA statistical profiles are generated from information received from the state's physicians annually at the time of license renewal. Final 1980 U.S. Census data describing Alabama's state and county populations have been published by the U.S. Bureau of the Census. State and county population figures for 1982 were taken from a previous intercensal estimate, done by the Center for Business and Economic Research for 1975-85, and corrected by adding the difference between the final 1980 census count and the CBER estimate for 1980 to the CBER estimate for 1982. This is recognized as arbitrary, but new intercensal estimates for the decade are not yet available. The 1982 Alabama population estimated by this method was 3,980,988.

Physician-to-population distributions were calculated using counties as the basic unit of reference as counties are generally the most common geopolitical units in Alabama. For some analyses counties were grouped according to the size of their populations: under 25,000, with no town in the county containing over 4,000 people (N = 16); under 25,000 with at least one town with a population over 4,000 (N = 10); 25,000-50,000 (N = 20); 50,000-100,000 (N = 14); 100,000-500,000 (N = 6); and over 500,000 (N = 1).

Physician-to-population ratios used as standards for comparing Alabama's current physician supply data were taken from the report of the Graduate Medical Education National Advisory Committee (GMENAC).[8] The physician manpower recommendations made by this committee are the ones most frequently cited in discussions of current and projected physician supplies.

Some Basic Characteristics of Physicians in Alabama

The latest available data on Alabama's current physician supply are presented in Table 1. Fully licensed doctors of medicine (M.D.) and doctors of osteopathy (D.O.) hold similar unrestricted licenses to practice medicine. Those holding limited licenses are nearly all in their first year of residency training. The total of 4,873 active physicians gives a ratio of 122 per 100,000 population in Alabama for 1982, or one per 817 people. The ratio of physicians to population for the U.S. as a whole was 200 per 100,000 in 1980 or one per 500 people, while the GMENAC recommended a ratio of 191 per 100,000, or one per 524 people.

TABLE 1
ALABAMA PHYSICIAN SUPPLY, 1982

Licensees	*Total Active*	*Full Time*	*Part Time*	*Unknown*
MD's	4716	4521	165	30
DO's	25	25		
Limited License MD's	132	132		
State Totals	4873	4678	165	30

Physician : Population Ratios: 122/100,000, or 1 : 817.

Hand tabulation from a July, 1980 computer printout (SHPDA) of 4,858 individual active physicians licensed in the state at that time and coded as to specialty, site of practice or employment, etc. was done to subtract identifiable military, federal, and state hospital physicians, residents in training, medical school faculty, administrative public health physicians, those employed full-time by industry, and all over the age of 75. Allowance was also made for part-time activity, resulting in a full-time equivalent number of only 3,253 physicians that may actually have been available in the state for direct patient care to the public at large. This was only 67 percent of the total active licensed physicians. Realizing that an unknown amount of patient care to the general public is rendered by some of these excluded physicians, the estimate was revised to 75%. Nationally, about 78 percent of physicians are in direct patient care.[9] Seventy-five percent of the state's current (1982) active physician total is 3,655, which gives a physician-to-population ratio of 92/100,000 or one per 1,089 people — about half of what this state should have if its need for physician services is anywhere near the same as that for the rest of the country. Good morbidity data for this state, with which to measure actual medical need for services, is unavailable, but surely, based on known health problems and the characteristics of Alabama's population, the need should be *no less*.

Table 2 presents physician-population ratios by county population size, using total numbers of active physicians (as in Table 1). Even though these ratios include large numbers of physicians who, although active, may not be available to the public at large for patient care, it can clearly be seen that adequate numbers of physicians are to be found currently only in the most populous counties, serving less than half of the total state population.

Geographic Location of Primary Care Physicians

For the purposes of physician manpower studies, it is customary to consider family physicians/general practitioners, general internists, and pediatricians as primary care physicians. In some national studies obstetricians and gynecologists are also included as primary care physicians, as they were in the present calcula-



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TABLE 2
DISTRIBUTION OF PHYSICIANS BY COUNTY POPULATION SIZE, 1982

County Population	*Number Counties*	*Population*	*Percent State Population*	*Total Active Physicians*	*Percent State Physicians*	*Physician/ Population Ratios*
Less than 25,000, no town 4,000+	16	248,805	6.2	73	1.5	29/100,000
Less than 25,000, at least one town 4,000+	10	198,369	5.0	80	1.6	40/100,000 (1:2,480)
25,000-50,000	20	728,186	18.3	399	8.2	55/100,000 (1:1,825)
50,000-100,000	14	983,961	24.7	766	15.7	78/100,000 (1:1,285)
100,000-500,000	6	1,147,743	28.8	1,759	36.1	153/100,000 (1:652)
More than 500,000	1	673,924	16.9	1,796	36.9	266/100,000 (1:375)
State Total	67	3,980,988	99.9	4,873	100.0	122/100,000 (1:817)

tions. The federal government uses a basic ratio of one active, nonfederal, primary patient care physician per 3,500 population as the point at which an area may be designated critically short (and therefore eligible for federal aid or a National Health Service Corps physician). A ratio of 1:3,000 is used if there is excess medical need, i.e., high birth rate or infant mortality rate, a large aged population, excess poverty, and several other factors.[10] A ratio of one primary care physician per 2,000 people is taken as the point at which an area no longer qualifies for federal aid — a minimum ''adequate'' level for primary care or generalist physicians.

In 1980, 44 whole counties and parts of 15 additional counties in Alabama were designated by the federal government as critically short of physicians.[11] In 1982 there were 28 counties (42% of Alabama's 67 counties) that had a ratio of 1:3,000 or worse, and another 11 counties which had fewer than the adequate number of 1:2,000 active physicians in primary care (only fully licensed M.D.'s have been counted here). The ratios range from 1:957 in Jefferson to 1:11,777 in Coosa County. In between, there were many counties with extremely serious shortages, as shown in Table 3. The U.S. ratio for primary care was 1:1,267 in 1980, and the Alabama overall ratio for 1982 was 1:1,762.

The average number of hours Alabama's primary care physicians spent each week in 1982 in direct patient care are shown in Table 4, grouped according to the size of the county in which the physicians practiced. The primary care category includes General Practice/ Family Practice, Internal Medicine, Pediatrics, and Obstetrics/Gynecology. While no comparable national averages are available for primary care, column three in the table presents the average number of hours of direct patient care per week reported for general practice.[12] The data in this column can be used for approximate

TABLE 3
PHYSICIAN-POPULATION RATIOS FOR PRIMARY CARE,* ALABAMA 1982
(fully licensed MD's only)

Ratio	*Number of Counties*
Better than 1:2,000	11
1:2,000-3,000	28
1:3,000-4,000	11
1:4,000-5,000	8
1:5,000-7,500	5
1:7,500-10,000	3
1:10,000+	1

* Fully licensed MD's only: GP/FP, IM, Peds, and OB/GYN.

TABLE 4
AVERAGE NUMBER OF HOURS OF DIRECT PATIENT CARE PER WEEK FOR ALABAMA'S PRIMARY CARE PHYSICIANS,* 1982

County Size	*# Counties*	*Primary Care*	*GP/FP Only*	*National Average for GP*
25,000, no town over 4,000	16	55.16	54.78	48.6
25,000, at least one town over 4,000	10	57.42	57.61	48.6
25,000-50,000	20	55.79	55.04	48.6
50,000-100,000	14	55.72	54.90	43.3
100,000-500,000	6	52.88	52.40	43.3
500,000+	1	49.56	45.73	43.3
State	67	52.82	52.90	

* Primary Care Physicians include GP/FP, IM, Peds, OB/GYN. The number of physicians in table includes all full-time active MD's; part-time physicians were given one-half value.

comparisons. As can be seen, Alabama primary care physicians provide more hours of direct patient care per week, up to a full day, than the national average for general practice.

Location and Supply of Specialists in Alabama

It is generally agreed that an appropriate distribution of physicians by specialty is 50 percent primary care or generalist physicians and 50 percent other specialists (minor variations from this figure have been suggested by the GMENAC[8] and Bridgers[13]). The federal government considers one physician per 2,000 persons as a *minimum* ratio for primary care. Adding an equal number of other specialists gives a total ratio of one physician per 1,000 people. However, this minimum does not truly meet the need as determined by the GMENAC and several other studies,[1, 2, 13] and accepted by Pittman,[14] i.e., that a satisfactory ratio would be one physician per 500 people, twice the minimum established by the federal government. This compares with Alabama's current ratio of one primary care physician per 1,762 persons, and one physician, of all kinds, per 817 persons.

Table 5 compares the availability of physicians in the state according to selected specialty and county population size. The data indicate that the distribution and in some cases concentration of medical care available to the population is centered in the state's largest counties. It is entirely proper for medical center communities to have relatively high concentrations of specialists because they serve as referral centers for the surrounding areas. A specialist or subspecialist can serve a larger population than can a primary care physician. The size of the population that can be served varies by specialty. Furthermore, medical school centers need specialists for teaching and research as well as patient care. It is a universal phenomenon in the U.S., nevertheless, to find specialists concentrated in the geographical areas containing medical schools, far beyond the numbers required for patient care, teaching, and research, if the centers are well developed (they are not fully developed as yet in Alabama, except in Birmingham).

In the past five years, about 50 percent of newly licensed physicians in the state have been in primary care specialties. This trend will need to continue, with particular emphasis on the broadly trained family physician for rural areas, if appropriate specialty distribution is to keep pace with the increase in total physician supply. If the state's total supply cannot be increased sufficiently, then the need for broadly trained physicians in areas of shortage will be even more important.

The subject of determining the need for and supply of physicians by specific specialties is complicated. The specialists listed in various data are self designated, and it is not clear what fraction of each specialist's time is devoted to his specialty in contrast to rendering primary care or other services. Another complicating fact is the substantial overlap in some functions of the various specialists. The geographic location of a physician may determine the scope of his functions if other appropriate specialists are not available in the locality.

Little work has been done in an effort to determine the proper numbers and balance among the various specialties. A paper by Bridgers[13] quoted one such study, while the GMENAC study provided the most recent attempt to deal with the problem of specialty requirements. That committee is far from satisfied with its initial results and hence the figures must be considered as rough and subject to further refinement. Table 6 compares a physician-to-population ratio for each of several selected specialties, based on requirements determined by the GMENAC study, and Alabama's 1982 supply.

Although Alabama is severely short in virtually all specialties except general surgery and neurosurgery, the unique problems in the state require special attention to three of the specialties, public health and pre-

TABLE 5
ALABAMA PHYSICIANS PER 100,000 POPULATION, 1982

County Size	*Number of Counties*	*Total Active Physicians*	*Primary Care*	*Family Practice/ General Practice*	*Internal Medicine*	*Pediatrics*	*Obstetrics Gynecology*	*General Surgery*
25,000, no towns over 4,000	16	29	24	20.5	1.2	1.6	0.4	2.8
25,000, at least one town over 4,000	10	40	31	25.7	3.0	1.5	0.5	5.5
25,000-50,000	20	55	37	25.1	6.0	3.0	3.3	6.0
50,000-100,000	14	78	39	19.4	9.2	5.3	5.3	8.1
100,000-500,000	6	153	67.7	26.3	18.7	10.9	11.7	11.7
500,000	1	268	105	19.5	47.9	21.9	15.6	19.7
Total State	67	122	54.8	22.8	17.1	8.9	8.0	10.3
National Supply (1980)	—	200	78.9	25.7	30.3	11.8	11.1	14.7
GMENAC Determined Need, 1990	—	191	85.6	34.5	28.8	12.4	9.9	9.7

TABLE 6
ACTIVE M.D. SPECIALISTS PER 100,000 POPULATION

Specialty	*GMENAC Determined Need*	*1982*
Total Active	**191**	**122**
GP/FP	**34.5**	**22.8**
Internal Medicine	**28.8**	**17.1**
Pediatrics	**12.4**	**8.9**
OB/GYN	**9.9**	**8.0**
Total Primary Care	**85.6**	**54.8**
Psychiatry	**19.5**	**4.1**
Neurology	**2.3**	**1.1**
Dermatology	**2.9**	**1.8**
General Surgery	**9.7**	**10.3**
Orthopedic Surgery	**6.2**	**4.4**
Ophthalmology	**4.8**	**4.0**
Neurosurgery	**1.1**	**1.1**
Anesthesiology	**8.6**	**4.0**
Pathology	**5.5**	**3.6**
Radiology	**7.4**	**6.8**
Preventive Medicine (+ Public Health, + Aerospace)	**3.0**	**1.0**
Total Non-Primary Care (if OB/GYN is included in Primary Care)	**105.7**	**61.7**

ventive medicine, obstetrics and gynecology, and psychiatry.

Currently, the state has only 31 physicians designating public health or general preventive medicine as their primary specialty. Until the state was reorganized into public health districts in 1981, only 24 counties were served by 13 physician health officers, not all of whom had special training in public health. This organization did not increase the number of physician health officers. The GMENAC standard suggests the need for at least 117.

Alabama has 317 physicians in the specialty of obstetrics and gynecology who practiced in only 36 counties. Only two separate counties (Jefferson and Mobile) and one health systems agency area (HSA3) had an obstetrician — population ratio better than 1:9,000 which meets the national average. Two other counties, Calhoun and Montgomery, were close to this with ratios of 1:8,300 and 1:9,200 respectively. The state ratio was 1:12,500. With Alabama's high neonatal mortality rate and with a projected large increase in the female population (age 25-44) due to the post World War II population bulge, there will be a need for an increasing number of these specialists. Forty-five percent of Alabama's female population will be in this age group during the 1980 decade.

Psychiatry is another specialty critically short in Alabama. The state has only 4.1 psychiatrists per 100,000 compared with the GMENAC standard of 19.5 per 100,000. A significant number of those available are in institutional work and not available to the public at large. Fifty-nine of Alabama's 67 counties and 18 of 21 psychiatry catchment or service areas, as defined by federal guidelines, were listed as shortage areas for psychiatry personnel in 1980.[11]

Conclusion

The state of Alabama has participated in a national trend to increase its output of physicians. However, the state's current total supply is only 122/100,000 population (or one per 817 persons) as compared to 200/100,000 (or one per 500 persons) nationally. Considering only those physicians that may actually be available to the public for direct patient care the state's current supply is 92/100,000 population or one physician for every 1,089 people. Several national studies have suggested an appropriate ratio of physicians to population to be within the range of 180-200/100,000, or about one physician for every 500 people.

Alabama has a serious maldistribution of physicians geographically. A very large number of counties are listed by the federal government as critically short of doctors. Physician:population ratios are grossly inadequate in the less populous counties, and at least half of the state's population are still underserved with respect to adequate medical care. A continued emphasis on the training of generalist or primary care physicians will be needed to better serve those areas of shortage.

Certain specialty physicians are also in extremely short supply in this state: obstetrician-gynecologists, psychiatrists, and public health-preventive medicine physicians are specifically mentioned. Special programs and incentives for physicians may be required, if many areas in need of medical care are to be served.

The second part of this study considers such issues on a broad level and presents a projection of Alabama's future supply of physicians.

Next month — Part II, Projecting Alabama's Future Supply of Physicians. ⊡

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President's Page

continued from page 7

Therefore, since cost containment is so urgent, and coincidentally so melled with our image, I am proposing that this dual subject receive much of the interest in the JOURNAL this coming year. I have imposed upon some 10 physicians throughout the state, to request entirely anonymous and completely candid appraisals and suggestions from a variety of sources. These include nurses, pharmacists, hospital administrators, inhalation therapists, industrialists, lawyers, accountants, pathologists, radiologists, and other physicians. Many representatives of each of these groups have mailed their statements to "the Anonymous Article Editor" at 19 South Jackson. The only identification — and it sometimes missing — was their occupation and general location in this state.

The talented and experienced former newspaperman, Bill McDonald, who with perhaps some reluctance, has agreed to group and collate these statements into what I hope will be a helpful, revealing, and provocative article. Contributors have been encouraged to "tell it like it is" and "let it all hang out." Consequently, criticism will outweigh compliments.

There will be those with which we disagree, those for which we have a just explanation, those that will be exaggerated, and those that will be at least in our opinion misinformed.

I would like to emphasize that these are not Bill McDonald's thoughts — he is merely passing on what I have requested from these sources. As an additional disclaimer, let it be recognized that these thoughts are not necessarily concurred in by MASA nor by physicians generally. When appropriate, contents of that month's article will serve as a focal point for editorializing on the President's Page.

I hope we can profit from these observations and suggestions and when applicable, the criticisms. Finally I hope you won't feel that I have stopped practicing and gone to meddling; nor, ever further, stopped meddling and gone to preaching.

Any reply as a "Letter to the Editor" will be respectfully received. In times of change and in times of stress, communication and participation are more valuable than ever. I trust you will do both. ⊡

Horn

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BRIEF SUMMARY
PROCARDIA® (nifedipine) **CAPSULES** For Oral Use

INDICATIONS AND USAGE: I. Vasospastic Angina: PROCARDIA (nifedipine) is indicated for the management of vasospastic angina confirmed by any of the following criteria: 1) classical pattern of angina at rest accompanied by ST segment elevation, 2) angina or coronary artery spasm provoked by ergonovine, or 3) angiographically demonstrated coronary artery spasm. In those patients who have had angiography, the presence of significant fixed obstructive disease is not incompatible with the diagnosis of vasospastic angina, provided that the above criteria are satisfied. PROCARDIA may also be used where the clinical presentation suggests a possible vasospastic component but where vasospasm has not been confirmed, e.g., where pain has a variable threshold on exertion or in unstable angina where electrocardiographic findings are compatible with intermittent vasospasm, or when angina is refractory to nitrates and/or adequate doses of beta blockers.

II. Chronic Stable Angina (Classical Effort-Associated Angina): PROCARDIA is indicated for the management of chronic stable angina (effort-associated angina) without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or organic nitrates or who cannot tolerate those agents.

In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in those patients are incomplete.

Controlled studies in small numbers of patients suggest concomitant use of PROCARDIA and beta blocking agents may be beneficial in patients with chronic stable angina, but available information is not sufficient to predict with confidence the effects of concurrent treatment, especially in patients with compromised left ventricular function or cardiac conduction abnormalities. When introducing such concomitant therapy, care must be taken to monitor blood pressure closely since severe hypotension can occur from the combined effects of the drugs. (See Warnings.)

CONTRAINDICATIONS: Known hypersensitivity reaction to PROCARDIA.

WARNINGS: Excessive Hypotension: Although in most patients, the hypotensive effect of PROCARDIA is modest and well tolerated, occasional patients have had excessive and poorly tolerated hypotension. These responses have usually occurred during initial titration or at the time of subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta blockers.

Severe hypotension and/or increased fluid volume requirements have been reported in patients receiving PROCARDIA together with a beta blocking agent who underwent coronary artery bypass surgery using high dose fentanyl anesthesia. The interaction with high dose fentanyl appears to be due to the combination of PROCARDIA and a beta blocker, but the possibility that it may occur with PROCARDIA alone, with low doses of fentanyl, in other surgical procedures, or with other narcotic analgesics cannot be ruled out. In PROCARDIA treated patients where surgery using high dose fentanyl anesthesia is contemplated, the physician should be aware of these potential problems and, if the patient's condition permits, sufficient time (at least 36 hours) should be allowed for PROCARDIA to be washed out of the body prior to surgery.

Increased Angina: Occasional patients have developed well documented increased frequency, duration or severity of angina on starting PROCARDIA or at the time of dosage increases. The mechanism of this response is not established but could result from decreased coronary perfusion associated with decreased diastolic pressure with increased heart rate, or from increased demand resulting from increased heart rate alone.

Beta Blocker Withdrawal: Patients recently withdrawn from beta blockers may develop a withdrawal syndrome with increased angina, probably related to increased sensitivity to catecholamines. Initiation of PROCARDIA treatment will not prevent this occurrence and might be expected to exacerbate it by provoking reflex catecholamine release. There have been occasional reports of increased angina in a setting of beta blocker withdrawal and PROCARDIA initiation. It is important to taper beta blockers if possible, rather than stopping them abruptly before beginning PROCARDIA.

Congestive Heart Failure: Rarely, patients, usually receiving a beta blocker, have developed heart failure after beginning PROCARDIA. Patients with tight aortic stenosis may be at greater risk for such an event.

PRECAUTIONS: General: Hypotension: Because PROCARDIA decreases peripheral vascular resistance, careful monitoring of blood pressure during the initial administration and titration of PROCARDIA is suggested. Close observation is especially recommended for patients already taking medications that are known to lower blood pressure. (See Warnings.)

Peripheral edema: Mild to moderate peripheral edema, typically associated with arterial vasodilation and not due to left ventricular dysfunction, occurs in about one in ten patients treated with PROCARDIA. This edema occurs primarily in the lower extremities and usually responds to diuretic therapy. With patients whose angina is complicated by congestive heart failure, care should be taken to differentiate this peripheral edema from the effects of increasing left ventricular dysfunction.

Drug interactions: Beta-adrenergic blocking agents: (See Indications and Warnings.) Experience in over 1400 patients in a non-comparative clinical trial has shown that concomitant administration of PROCARDIA and beta-blocking agents is usually well tolerated, but there have been occasional literature reports suggesting that the combination may increase the likelihood of congestive heart failure, severe hypotension or exacerbation of angina.

Long-acting nitrates: PROCARDIA may be safely co-administered with nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.

Digitalis: Administration of PROCARDIA with digoxin increased digoxin levels in nine of twelve normal volunteers. The average increase was 45%. Another investigator found no increase in digoxin levels in thirteen patients with coronary artery disease. In an uncontrolled study of over two hundred patients with congestive heart failure during which digoxin blood levels were not measured, digitalis toxicity was not observed. Since there have been isolated reports of patients with elevated digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing PROCARDIA to avoid possible over- or under-digitalization.

Carcinogenesis, mutagenesis, impairment of fertility: When given to rats prior to mating, nifedipine caused reduced fertility at a dose approximately 30 times the maximum recommended human dose.

Pregnancy: Category C. Please see full prescribing information with reference to teratogenicity in rats, embryotoxicity in rats, mice and rabbits, and abnormalities in monkeys.

ADVERSE REACTIONS: The most common adverse events include dizziness or light-headedness, peripheral edema, nausea, weakness, headache and flushing each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%. Syncopal episodes did not recur with reduction in the dose of PROCARDIA or concomitant antianginal medication. Additionally, the following have been reported: muscle cramps, nervousness, dyspnea, nasal and chest congestion, diarrhea, constipation, inflammation, joint stiffness, shakiness, sleep disturbances, blurred vision, difficulties in balance, dermatitis, pruritus, urticaria, fever, sweating, chills, and sexual difficulties. Very rarely, introduction of PROCARDIA therapy was associated with an increase in anginal pain, possibly due to associated hypotension.

In addition, more serious adverse events were observed, not readily distinguishable from the natural history of the disease in these patients. It remains possible, however, that some or many of these events were drug related. Myocardial infarction occurred in about 4% of patients and congestive heart failure or pulmonary edema in about 2%. Ventricular arrhythmias or conduction disturbances each occurred in fewer than 0.5% of patients.

Laboratory Tests: Rare, mild to moderate, transient elevations of enzymes such as alkaline phosphatase, CPK, LDH, SGOT, and SGPT have been noted, and a single incident of significantly elevated transaminases and alkaline phosphatase was seen in a patient with a history of gall bladder disease after about eleven months of nifedipine therapy. The relationship to PROCARDIA therapy is uncertain. These laboratory abnormalities have rarely been associated with clinical symptoms. Cholestasis, possibly due to PROCARDIA therapy, has been reported twice in the extensive world literature.

HOW SUPPLIED: Each orange, soft gelatin PROCARDIA CAPSULE contains 10 mg of nifedipine. PROCARDIA CAPSULES are supplied in bottles of 100 (NDC 0069-2600-66), 300 (NDC 0069-2600-72), and unit dose (10x10) (NDC 0069-2600-41). The capsules should be protected from light and moisture and stored at controlled room temperature 59° to 77°F (15° to 25°C) in the manufacturer's original container.

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Please see PROCARDIA *brief summary on adjoining page.*

Bactrim™ attacks the
(trimethoprim and sulfamethoxazole/Roche)
in acute exacerbations

Bactrim concentrates in serum and penetrates sputum[1-3]

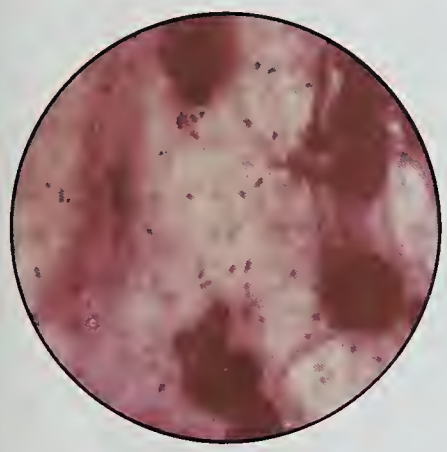


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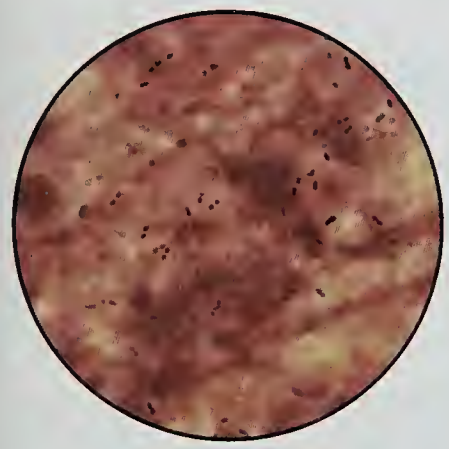
ROCHE

major pathogens of chronic bronchitis*

attacks *H. influenzae*—even ampicillin-resistant strains



attacks *S. pneumoniae*



Bactrim clears sputum of susceptible bacteria

In sputum cultures from patients with acute exacerbations of chronic bronchitis, *H. influenzae* and *S. pneumoniae* are isolated more often than any other pathogens.[4,5] One study of transtracheal aspirates from 76 patients with acute exacerbations found that 80% of the isolates were of these two pathogens.[5]

Bactrim is effective *in vitro* against most strains of both *S. pneumoniae* and *H. influenzae*—even ampicillin-resistant strains. And in acute exacerbations of chronic bronchitis involving these two pathogens, sputum cultures taken seven days after a two-week course of therapy showed that Bactrim eradicated these bacteria in 91% (50 of 55) of the patients treated.[6]

Bactrim reduces coughing and sputum production

In three double-blind comparisons with ampicillin *q.i.d.*, Bactrim DS proved equally effective on all clinical parameters.[7-9] Bactrim reduced the frequency and severity of coughing, reduced the amount of sputum produced and cleared the sputum of purulence.

Bactrim has the added advantages of *b.i.d.* dosage convenience and a lower incidence of diarrhea than with ampicillin, and it is useful in patients allergic to penicillins.

Bactrim also proved more effective than tetracyclines in 10 clinical trials involving nearly 700 patients.[10] Overall clinical condition of the patients, changes in sputum purulence, reduction in sputum volume and microbiological clearance of pathogens—all improved more with Bactrim therapy than with tetracyclines. G.I. side effects occurred in only 7% of patients treated with Bactrim compared with 12% of tetracycline-treated patients. (See Adverse Reactions in summary of product information on next page.)

Bactrim is contraindicated in pregnancy at term and nursing mothers, infants under two months of age, documented megaloblastic anemia due to folate deficiency and hypersensitivity.

Bactrim DS. For acute exacerbations of chronic bronchitis in adults* when it offers an advantage over single-agent antibacterials.

References: 1. Hughes DTD, Bye A, Hodder P: *Adv Antimicrob Antineoplastic Chemother I/2*:1105-1106, 1971. **2.** Jordan GW *et al: Can Med Assoc J 112*:91S-95S, Jun 14, 1975. **3.** Beck H, Pechere JC: *Prog Antimicrob Anticancer Chemother 1*:663-667, 1969. **4.** Quintiliani R: Microbiological and therapeutic considerations in exacerbations of chronic bronchitis, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts;* Princeton Junction, NJ, Communications Media for Education, Inc., 1980, pp. 9-12. **5.** Schreiner A *et al: Infection* 6(2):54-56, 1978. **6.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **7.** Chodosh S: Treatment of acute exacerbations of chronic bronchitis: results of a double-blind crossover clinical trial, in *Chronic Bronchitis and Its Acute Exacerbations: Current Diagnostic and Therapeutic Concepts. Op. cit.*, pp. 15-16. **8.** Chervinsky P: Double-blind clinical comparisons between trimethoprim-sulfamethoxazole (Bactrim™) and ampicillin in the treatment of bronchitic exacerbations. *Ibid.*, pp. 17-18. **9.** Dulfano MJ: Trimethoprim-sulfamethoxazole vs. ampicillin in the treatment of exacerbations of chronic bronchitis. *Ibid.*, pp. 19-20. **10.** Medici TC: Trimethoprim-sulfamethoxazole (Bactrim™) in treating acute exacerbations of chronic bronchitis: summary of European clinical experience. *Ibid.*, pp. 13-14.

Economical b.i.d.

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole/Roche)

*Due to susceptible organisms. **Please see next page for summary of product information.**

Bactrim™

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS:

Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

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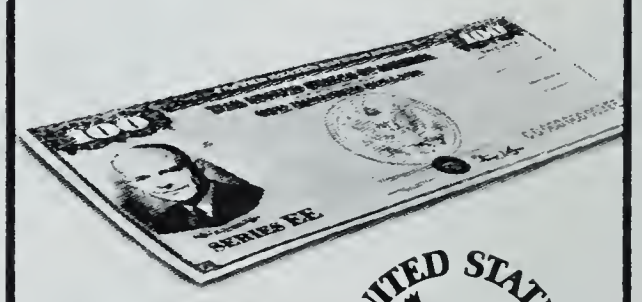
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Arcades of Struthers

David G. Vesley, M.D.*
and
John T. Killian, M.D.†

Introduction

John Struthers,[3, 4, 5] an anatomist at the University of Edinburgh, described during the 1840's a series of nine arcades formed by musculotendinous and fibrous structures in the arm. In his textbook in 1848, he grouped the arcades into those eight associated with the median nerve-brachial artery and the single one associated with the ulnar nerve.

Over one hundred years passed before the clinical significance of these arcades was appreciated. Kaplan,[1, 2] Spinner,[2] and Johnson[1] have demonstrated peripheral nerve compression by two arcades in the arm. A review of the original description of the arcades and their correlation to peripheral nerve compression syndromes is presented.

Classification

The arcades are classified into two groups based upon their occurrence in over one hundred anatomical dissections performed by Struthers (Table I). There are eight arcades which cross the median nerve and brachial artery in their course anteriorly from the axilla to the antecubital level of the arm. There is a single arcade which crosses the ulnar nerve distally in the posterior compartment of the arm.

Median Nerve — Brachial Artery Arcades

The first arcade is formed by a muscular slip from the Latissimus Dorsi passing across the axilla to insert into the Pectoralis Major, Coracobrachialis, or Biceps tendon (Figure 1). The brachial-axillary artery and nerve structures pass under this muscular slip and are displaced from their normal anatomical path at this level. The second arcade is formed by a muscular slip arising from the tendon of the Coracobrachialis, passing medially to insert in the intermuscular septum (Figure 2). This accessory muscle covers the brachial artery and median nerve during their course in the upper one-third of the arm. The third arcade is formed by a third head of the Biceps originating at the medial intermuscular septum and inserting distally into the bicipital aponeurosis and semilunar process (Figure 3). This third head is split into a superficial and deep portion and the neurovascular structures pass between the two layers. The fourth arcade is formed by a musculotendinous slip passing over the median nerve and brachial artery in the lower one-third of the arm, just adjacent to the Brachialis Anticus. This slip may arise from the Biceps muscle belly (Figure 4A), Bicipital ridge (Figure 4B), or Greater Tuberosity (Figure 4C) and pass

TABLE I
MEDIAN NERVE-BRACHIAL ARTERY ARCADES INCIDENCE

I.	**8 of 105 subjects**
II.	**1 of 105 subjects**
III.	**5 of 105 subjects**
IV.	**3 of 105 subjects**
V.	**13 of 105 subjects**
VI.	**Very frequently**
VII.	**Very frequently**
VIII.	**Very frequently**
Ulnar Arcade Incidence	
I.	**1 of 105 subjects**

* Associate Professor Orthopaedic Surgery, University of Alabama in Birmingham, University Hospital, Division of Orthopaedic Surgery, Birmingham, Alabama.
† Senior Orthopaedic Surgery Resident, University of Alabama in Birmingham, University Hospital, Division of Orthopaedic Surgery, Birmingham, Alabama.

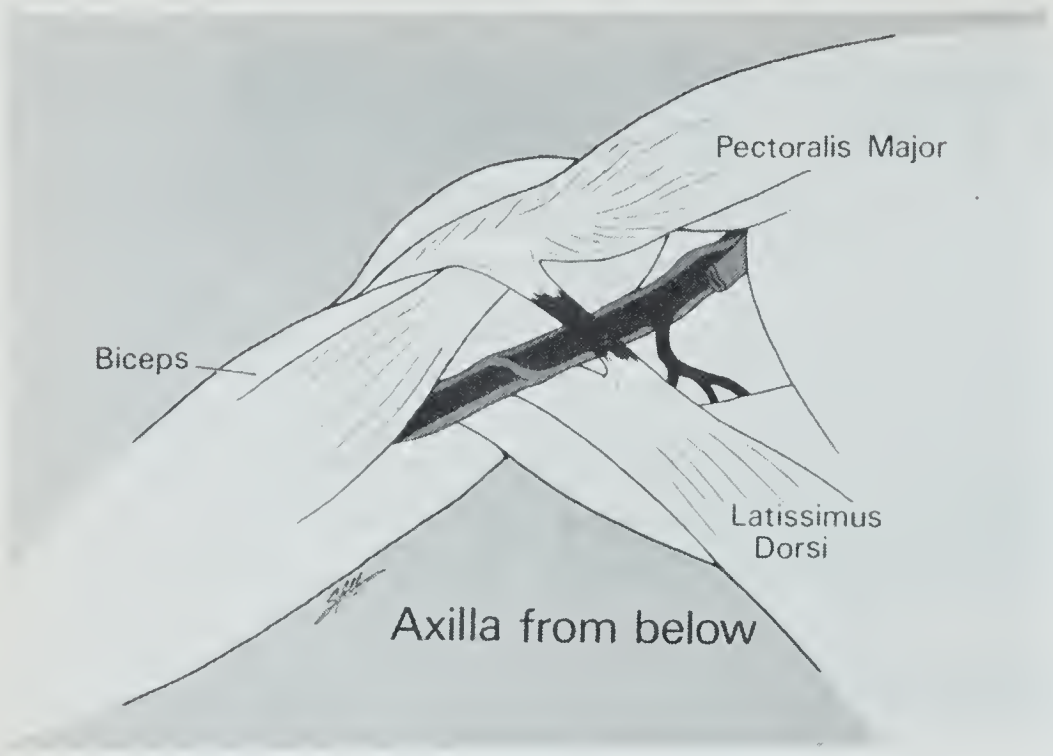


Figure 1. The first median nerve-brachial artery arcade consists of a muscular slip from the latissimus dorsi to the pectoralis major, coracobrachialis, or biceps tendon.

distally to insert into the Pronator Teres aponeurosis. The fifth arcade is formed by an accessory brachial head of the Biceps surrounding the neurovascular structures in the lower arm (Figure 5). This accessory head of the Biceps arises from the medial humerus at the level of the Brachialis Anticus and ends by blending into the bicipital aponeurosis. The sixth arcade is formed by a portion of the Brachialis Anticus passing over the median nerve and brachial artery in the lower two-thirds of the arm (Figure 6). This anomalous portion inserts into the Pronator Teres aponeurosis. The seventh arcade is formed by the Pronator Teres muscle (Figure 7). It is associated with an abnormal origin of the muscle from the medial supracondylar ridge (instead of the medial humeral condyle) and a resultant relative displacement of the neurovascular structures at the antecubital level. The eighth arcade is not a true muscle arcade. It is formed by the Ligament of Struthers, a fibrous band, extending from the supracondyloid process, a bony spur on the distal medial humer-

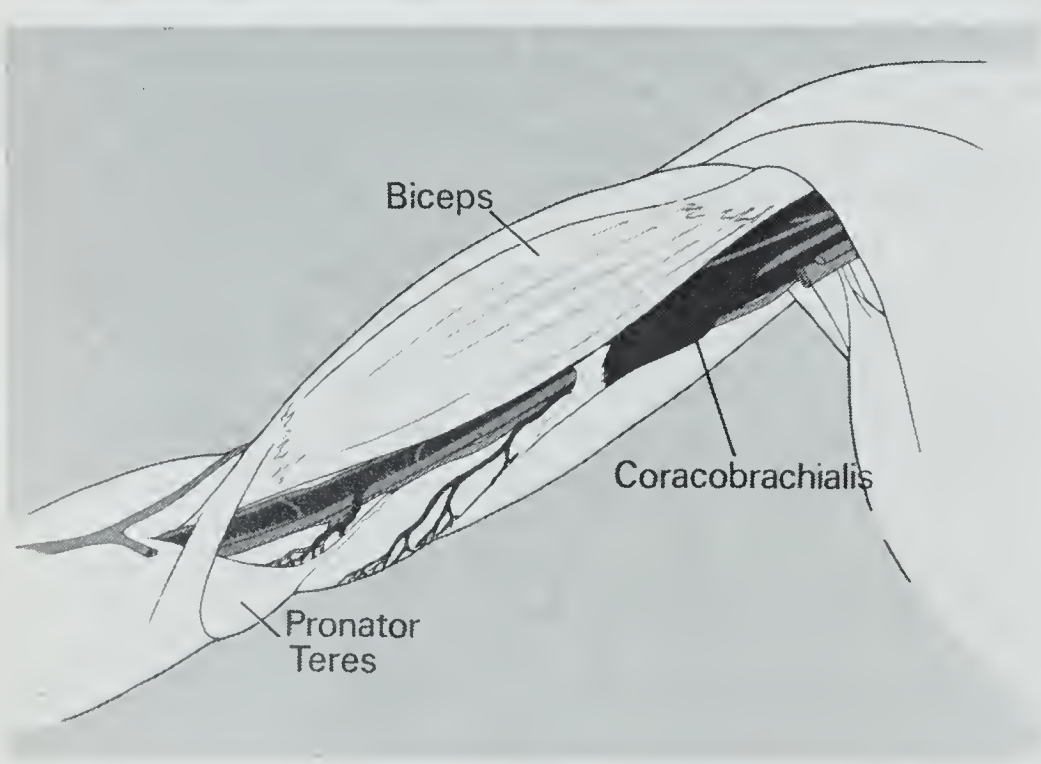


Figure 2. The second median nerve-brachial artery arcade consists of a muscular slip from the coracobrachialis passing over the neurovascular structures and attaching to the medial intermuscular septum.

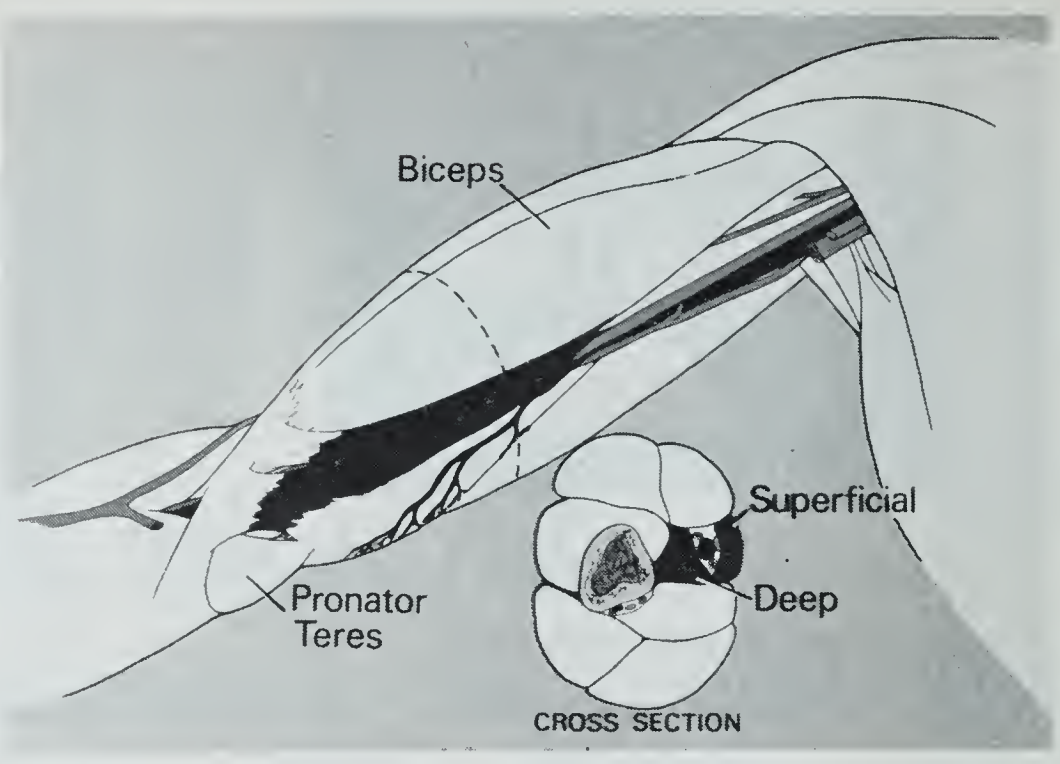


Figure 3. The third median nerve-brachial artery arcade consists of a broad, third head of the biceps passing around these structures in the lower third of the arm.

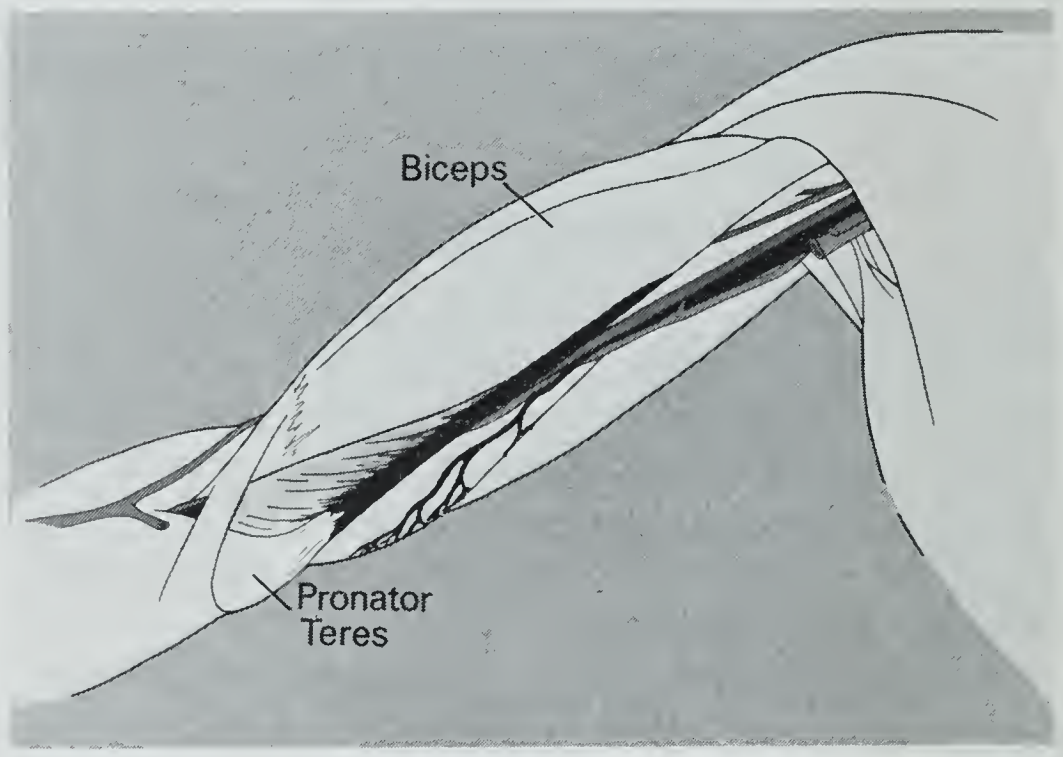


Figure 4A. The fourth median nerve-brachial artery arcade consists of a musculotendinous slip passing from the biceps (4A) over the neurovascular structures to insert into the pronator teres aponeurosis.

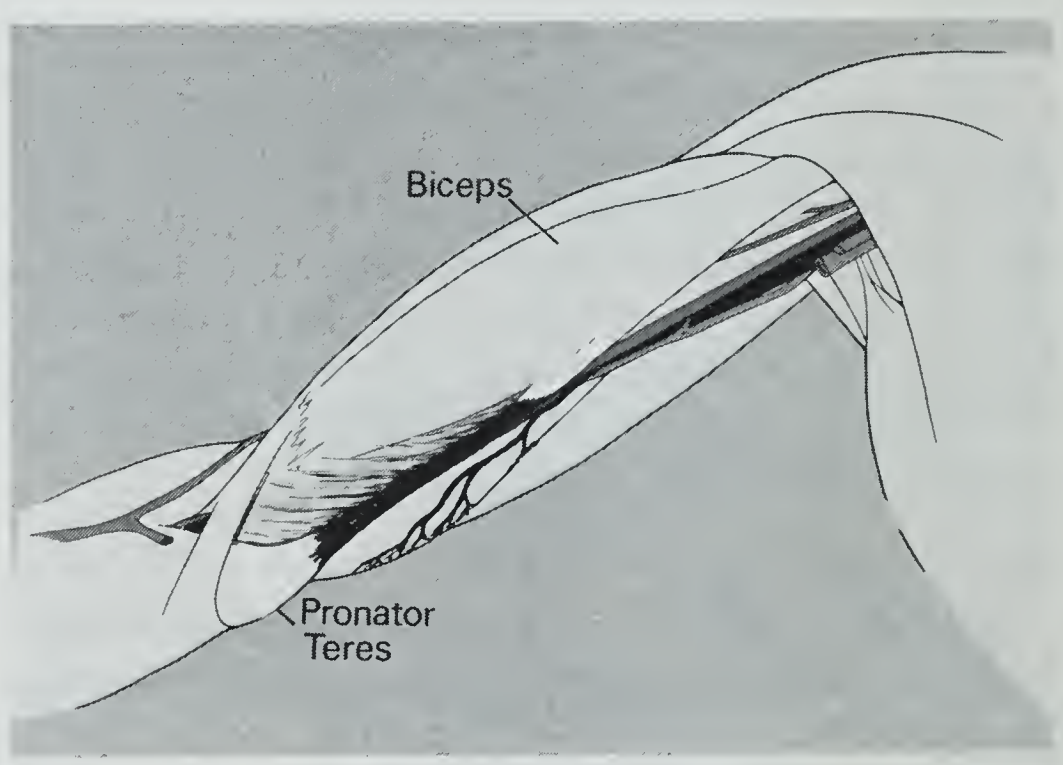


Figure 4B. The fourth median nerve-brachial artery arcade consists of a musculotendinous slip passing from the bicipital tuberosity (4B) over the neurovascular structures to insert into the pronator teres aponeurosis.

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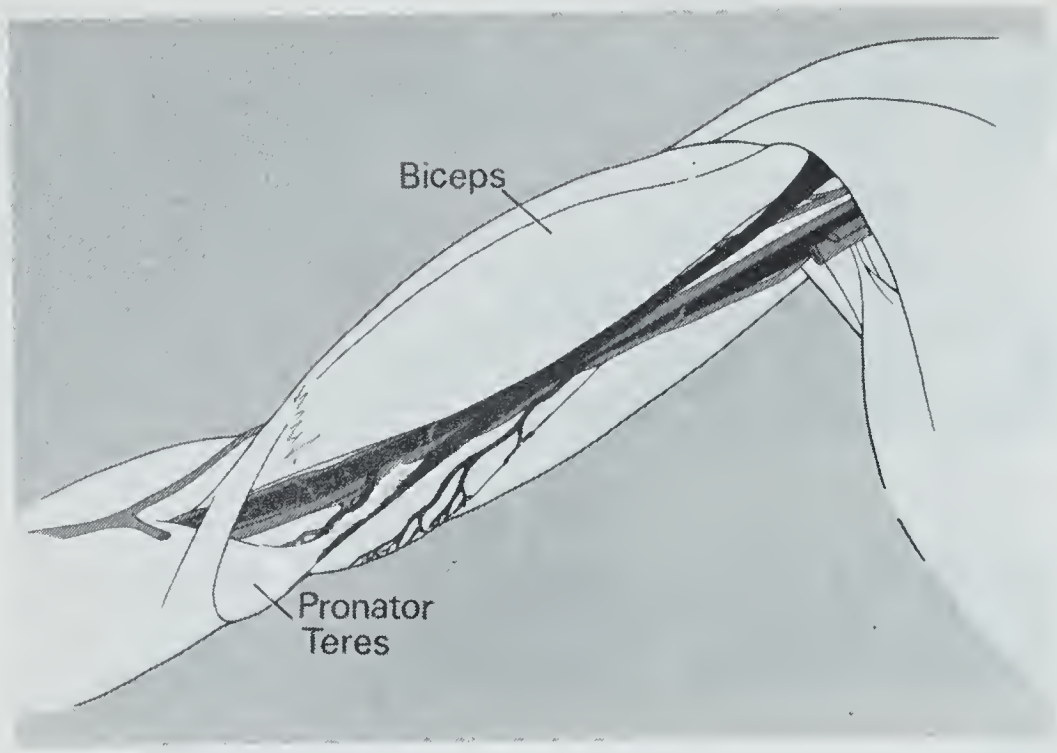


Figure 4C. The fourth median nerve-brachial artery arcade consists of a musculotendinous slip passing from the pectoralis major (4C) over the neurovascular structures to insert into the pronator teres aponeurosis.

us, to the medial humeral condyle (Figure 8). The median nerve and brachial artery must deviate from their usual course in order to pass around the supracondyloid process and through this arcade.

Ulnar Nerve Arcade

The ulnar nerve arcade is located in the posterior compartment of the arm, five to seven centimeters above the medial humeral condyle. It is formed by a fibrous septum which extends from the medial intermuscular septum to the long head of the Triceps (Figure 9). This arcade covers the ulnar nerve vessels as they pass from the anterior to the posterior compartment of the arm.

Clinical Correlation

Struther's contribution to the clinical significance of these arcades dealt with the associated vascular anomalies. With the first arcade, the abnormal course of the brachial-axillary artery through the axilla sometimes resulted in its being erroneously ligated when it was

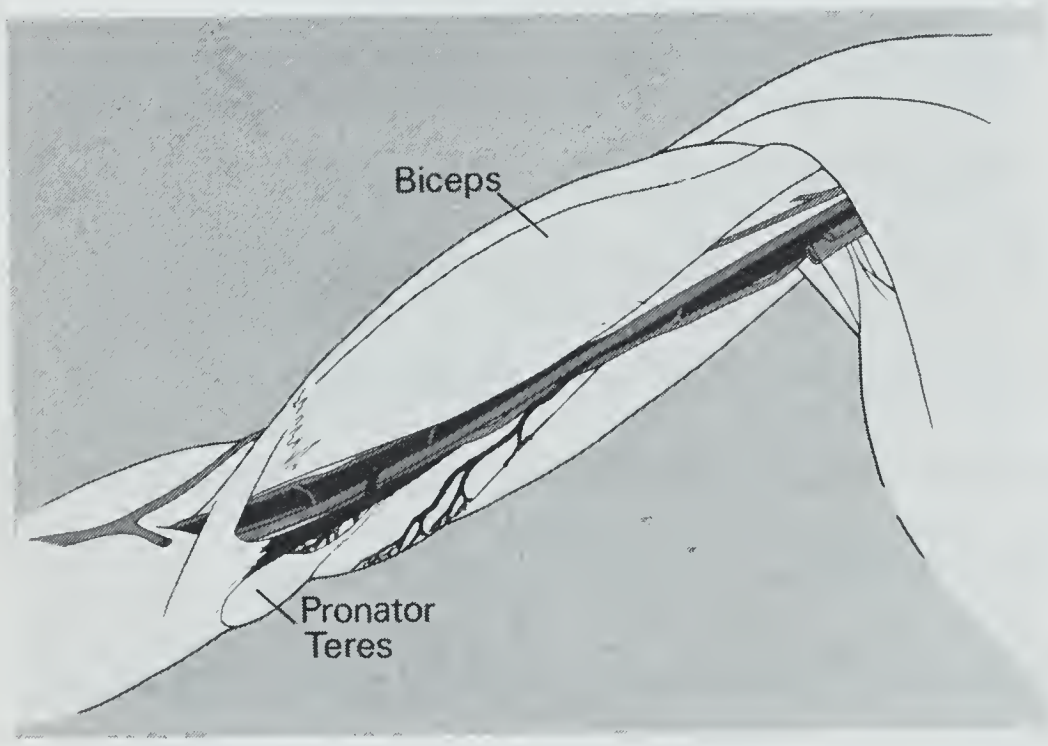


Figure 5. The fifth median nerve-brachial artery arcade consists of a brachial head of the biceps surrounding the neurovascular structures.

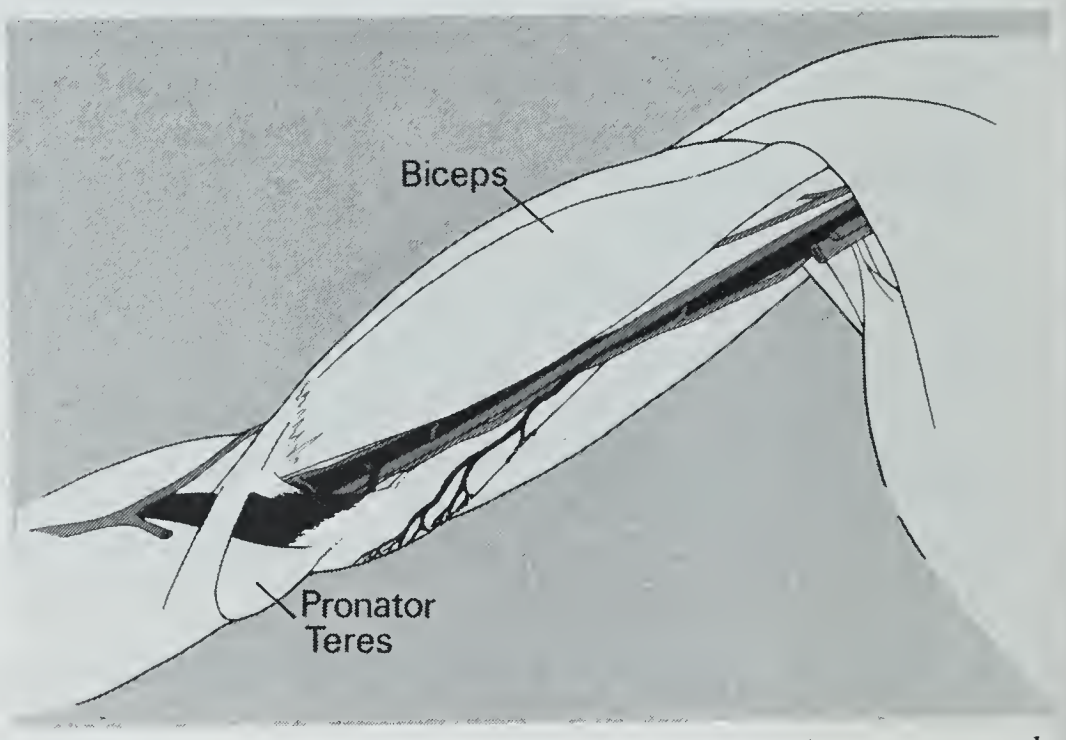


Figure 7. The seventh median nerve-brachial artery arcade consists of the pronator teres originating above the medial humeral condyle and passing over the neurovascular structures.

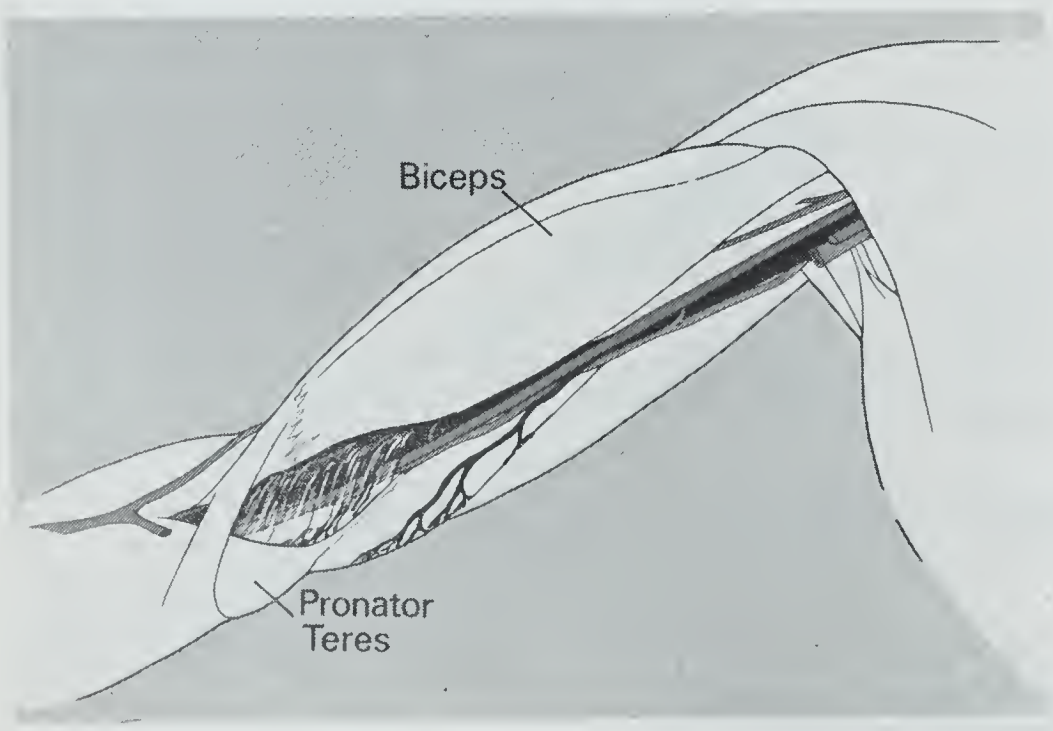


Figure 6. The sixth median nerve-brachial artery arcade consists of an accessory muscular slip of the brachialis anticus passing over these structures in the lower third of the arm.

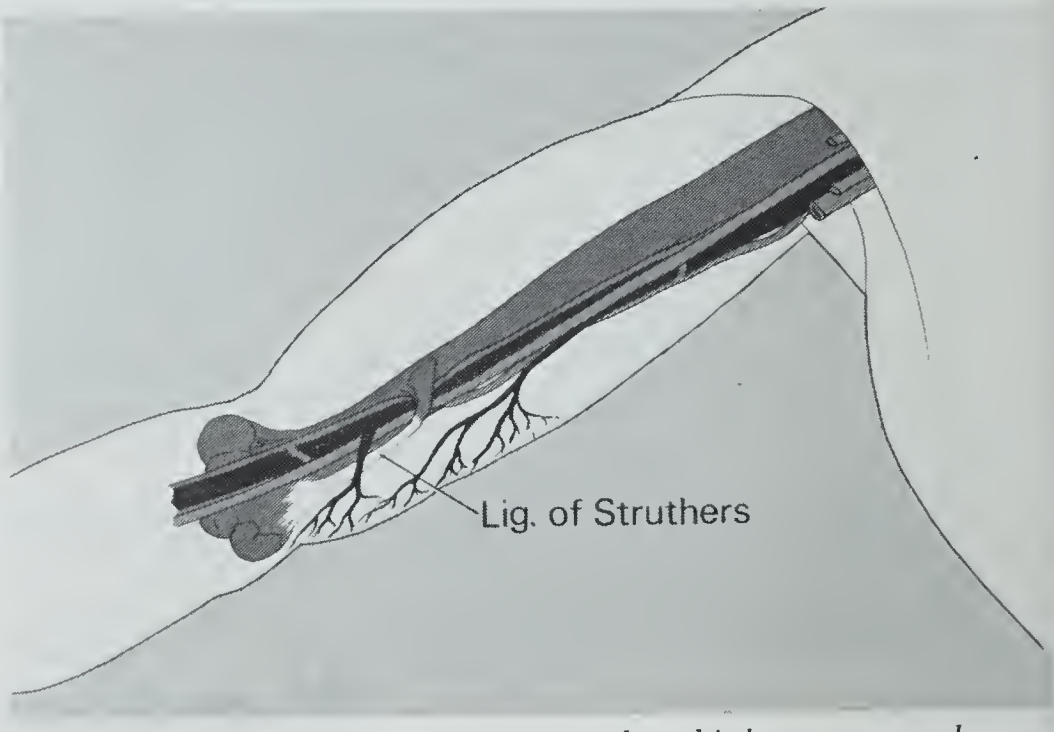


Figure 8. The eighth median nerve-brachial artery arcade consists of the ligament of Struthers passing from the supracondyloid process to the medial humeral condyle.

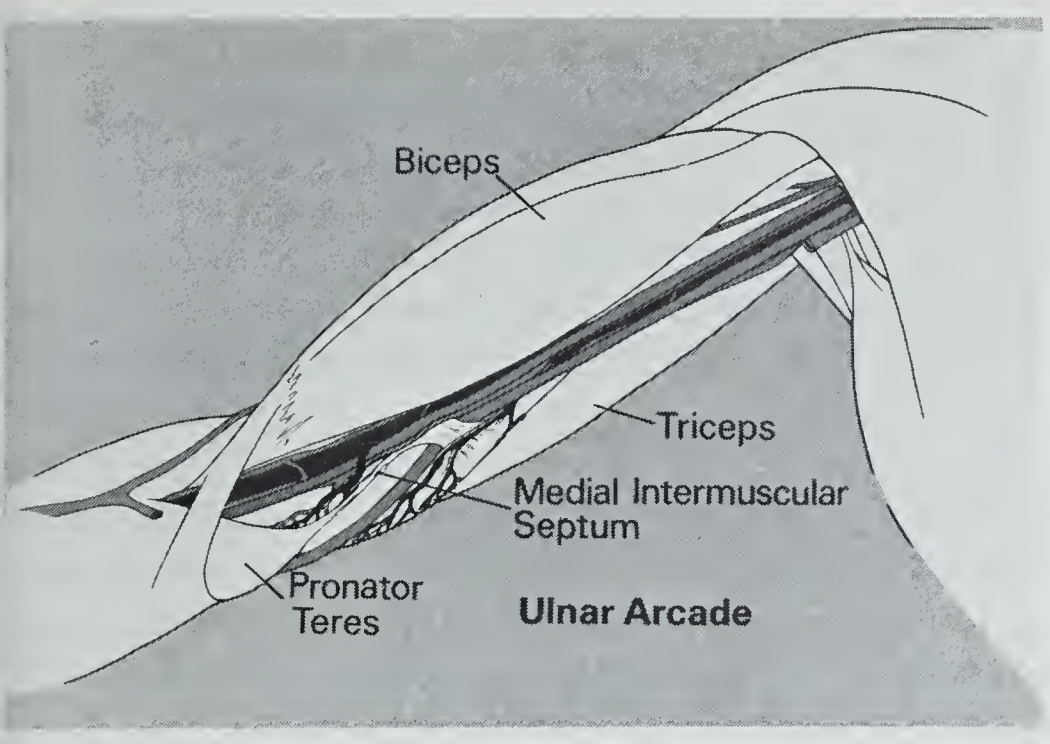


Figure 9. The ulnar arcade consists of a fibrous septum between the long head of the triceps and medial intermuscular septum which spans the ulnar nerve proximal to the cubital tunnel.

mistaken for the humeral circumflex or subscapular artery. The sixth arcade was often associated with a bifurcation of the brachial artery. The main branch passed beneath the arcade and was imbedded by it in the Brachialis Anticus. The seventh arcade altered the relative course of the brachial artery at the antecubital level. The eighth arcade was associated with a high bifurcation of the brachial artery. The ulnar branch passed around the supracondyloid process while the radial branch passed over it.

It was the 1970's before clinical evidence emerged concerning peripheral nerve compression by these arcades. Johnson[1] demonstrated evidence of median nerve compression and a characteristic symptomatology by the seventh arcade and designated this the Pronator Syndrome. Spinner and Kaplan[2] documented that the ulnar nerve arcade produces recurrent ulnar nerve neuritis after anterior transposition of the nerve at the elbow. A secondary compression of the ulnar nerve and recurrence of symptoms occurred by allowing the nerve to remain tethered by the arcade in the posterior compartment of the arm. They recommended lysis of this arcade in order to facilitate complete anterior transposition of the nerve. Kaplan and Spinner[2] also postulated that the ulnar nerve arcade was involved in the production of ulnar nerve palsies in supracondylar fractures due to tethering of the nerve during the injury. To date, only these two arcades have been implicated in the pathomechanics of peripheral nerve compression in the arm.

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Enterolith as a Cause of Bowel Obstruction

Z. B. Barnes, M.D.

Obstruction of either the small bowel or colon by an enterolith is a rarity. In such cases, an unprepared bowel must be opened for extraction of the stone and complications of this, including wound infection, have been a problem. Two cases of bowel obstruction due to enterolith are reported. In both cases the wound skin and fat were not primarily closed, and intraoperative and post-operative antibiotics were used. There was no wound infection in these patients, and similar management of patients with gallstone ileus has resulted in no wound infection.

It is always surprising to operate for bowel obstruction and find a large stone impacted in the lumen of the gut. Most of these stones come from the gallbladder, erode the walls of the gallbladder and duodenum, travel down the small bowel and obstruct the terminal ileum.

Rarely an enterolith will form in a duodenal or jejunal diverticulum, extrude, and block the ileum. These are so unusual that they are not mentioned in the standard textbooks of surgery or pathology. I recently encountered such a case at laparotomy for small bowel obstruction in an elderly patient. Several similar cases are reported in the British literature.[1, 2]

Enteroliths may also form in the colon other than in the lumen of the appendix.[3] A case of complete obstruction of the sigmoid colon by a "fecal stone" required enterotomy to remove the impacted stone, and colostomy. Following surgery all efforts to evacuate calcified feces from the right colon failed until gastrografin was used.

Case Reports

Case 1

A female, age 92, having been in good general health, became acutely ill 18 hours prior to admission to Jackson Hospital, Montgomery, Alabama on April 27, 1982. Her symptoms were severe abdominal cramps, vomiting, and failure to pass flatus or have a bowel movement.

Physical examination revealed generalized abdominal tenderness and moderate distension, and x-rays of the abdomen showed dilated loops of small bowel in-

dicative of obstruction. The white blood count was 18,000 (92% polys).

Emergency laparotomy was performed. In the proximal ileum there was a foreign body completely occluding the gut. Proximal to the occlusion the bowel was distended and inflamed, and distal to the occlusion the bowel was completely collapsed. Also proximal to the obstruction there were three jejunal diverticulae and a duodenal diverticulum, which on palpation and inspection contained no foreign material. There were large gallstones, without evidence of cholecystitis. The gallbladder was not adherent to the duodenum and the cystic duct was 1.5mm. in diameter. The common duct was 1cm. in diameter and showed no evidence of stone or inflammation. The foreign body was removed from the ileum by enterotomy and proved to be a stone. The gallbladder was also removed. Recovery was uneventful.

The stone was described as having a greenish-yellow color and analysis showed the major component to be bilirubin. Cholesterol phosphate was also detected. The analysis of this stone is typical of those described[1, 2] and supports the view that it formed in one of the diverticulae.

Case 2

A 60-year-old female was admitted to Jackson Hospital, May 6, 1979, with complaints of abdominal pain, nausea and vomiting for at least several days. For several months increase in size of her abdomen had been noted so that she had to wear larger clothes. Various laxatives had yielded poor results. Because of chronic back pain due to osteoporosis she had been taking numerous analgesics, including codeine, and large doses of oral calcium.

On examination in the emergency room there was marked dehydration and abdominal distension. Following admission her condition deteriorated and blood pressure fell to shock levels. At this time surgical consultation was obtained. A diagnosis of bowel obstruction and hypovolemic shock was made. Rapid intravenous infusions restored blood pressure and hydration after which emergency laparotomy was done. We found complete obstruction of the colon at the sigmoid level due to an impacted foreign body. Proximal to the obstruction the bowel showed huge dilatation, and distal to the obstruction was collapsed. It was necessary to open the unprepared colon to disengage this obstructing object, which proved to be a smooth, hard, calcified bolus of feces measuring 4cm. in diameter. The proximal colon contained similar but smaller pieces of stony hard fecal material. This portion of sigmoid colon was brought out as a loop colostomy. During the recovery period, and before colostomy closure, numerous laxatives, stool softeners and enemas failed to remove a large amount of calcified fecal material from the right colon. Finally gastrografin enemas accomplished this rather dramatically. Three months later, the colostomy was closed. The patient has returned to work, is asymptomatic, and has normal bowel action.

Discussion

These unusual cases are reported to call attention to the fact that a stone formed in the bowel may migrate and cause a bowel obstruction. There is little chance that a pre-operative diagnosis will be made and it will be necessary to open an unprepared, obstructed bowel to remove the foreign body. In both of these patients this was accomplished without wound infection. Each patient received intra-operative intravenous antibiotics which were continued post-operative. The wounds were closed with ''0'' prolene fascial sutures only, so that the subcutaneous fat and skin were not primarily approximated. Day and Marks[4] in a review of the literature of gallstone ileus found a 75% wound infection rate. It is assumed that all of those wounds were closed primarily. In a personal series of three cases of gallstone ileus, there have been no wound infections, operative complications or mortality. These patients did not have primary closure of skin and subcutaneous fat and received intra-operative antibiotics.

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Gonorrhea Control in Tuscaloosa

Alabama Department of Public Health

Gonorrhea and gonococcal pelvic inflammatory disease can be controlled in a cost-effective program, the Tuscaloosa County Venereal Disease Program has demonstrated.

The gonorrhea case rate in Tuscaloosa County in the 1978 calendar year was approximately two and one-half times the national rate, with a total of 1,860 cases reported. Tuscaloosa County's rate of 1,527.1 per 100,000 population was even higher than larger urban areas such as Jefferson and Mobile counties.

To address this urgent problem head on, the Alabama Department of Public Health assigned a full-time venereal disease program supervisor and three full-time casefinders to the Tuscaloosa area in the spring of 1978.

The first order of business was to expand the existing routine screening program among females attending non-venereal disease public health clinics or seeing selected private physicians. Another initial aim was to begin interviewing all first-time infected patients and following up on their sex contacts.

Routine screening of females was directed to detecting gonorrhea infections in women age 35 or younger, because few infections had been reported in women over 35. A courier was added to the staff to aid in the delivery of media between the health department and provider sites.

In 1979 the roots of GPID (gonococcal pelvic inflammatory disease) program were established. Solid rapport between the health department and Druid City Hospital was developed because of a concerned and cooperative hospital staff. As a result epidemiologic services were begun for patients diagnosed with GPID.

During the next 24 months continual refinements occurred in the GPID effort. Changes included the medical assessment of patients after treatment, a reculture at four to six weeks after treatment and interviews of infected persons brought to treatment.

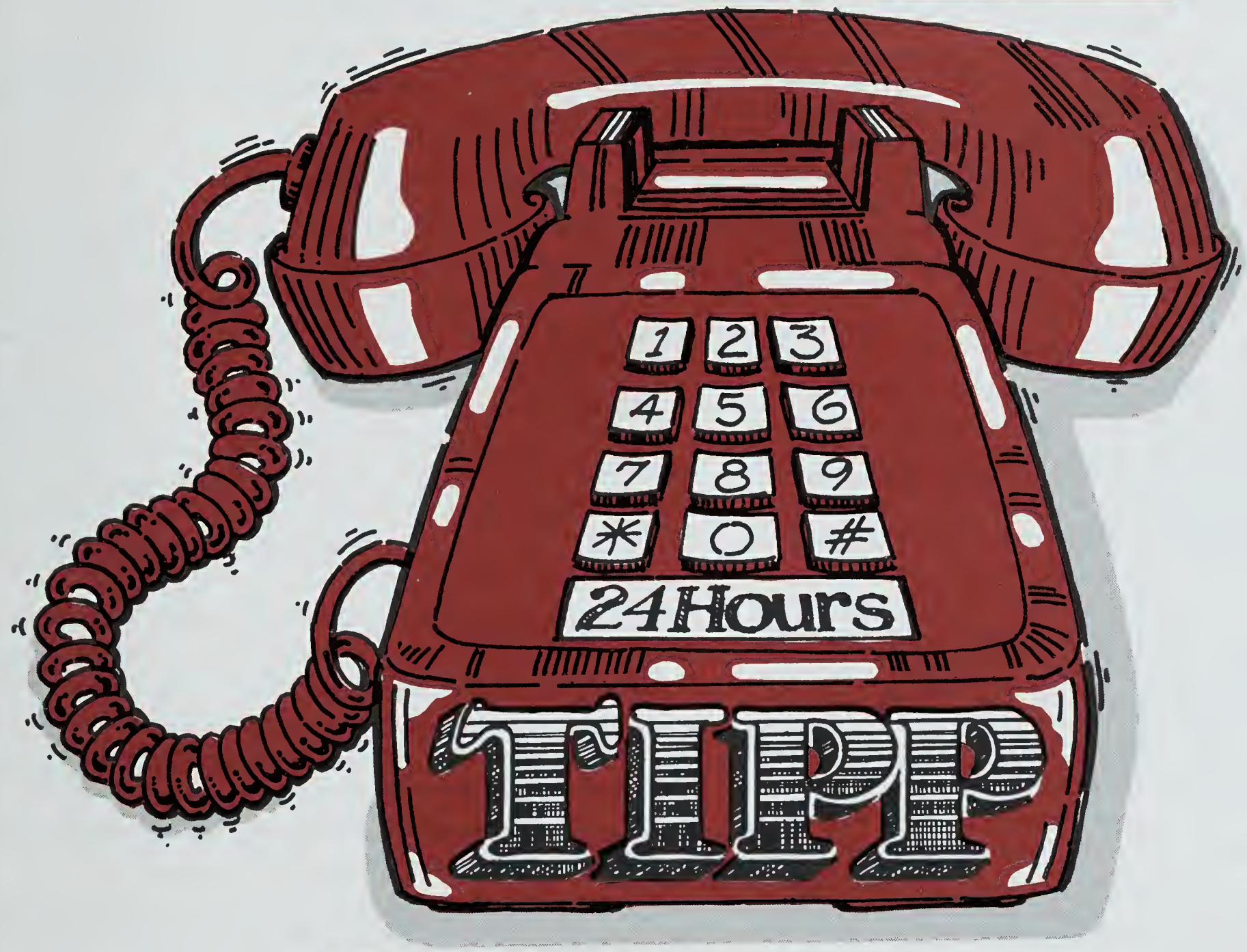
At the same time a major epidemiologic thrust was implemented involving repeater patients, those reinfected within six months. The rationale for this is that female repeaters are frequently the same patients who develop GPID, and female repeaters often have male sex partners with asymptomatic infections. These asymptomatic male patients represent a significant pool of infections that continually perpetuate the chain of infection.

Lastly, all patients were followed for a test-of-cure and rescreen culture four to six weeks after treatment. Not all patients responded to this tool, but they were

Reported Gonorrhea
Tuscaloosa County
1978-1981

	1978	*1979*	*1980*	*1981*	*% Decrease from 1978*
Male	**729**	**618**	**640**	**598**	**−18.0**
Female	**1,131**	**892**	**754**	**758**	**−33.0**
Total	**1,860**	**1,510**	**1,394**	**1,356**	**−27.1**

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followed in the field and were offered this service.

This expansion of program activities occurred from the spring of 1979 to January of 1981.

This 27.1 percent overall decrease in reported morbidity was significant, especially because the systems for reporting cases were actually strengthened during this time. Extensive and intensive epidemiology is credited as the primary cause.

Female morbidity was reduced more than male morbidity because of the combination of routine screening and epidemiology.

Cost Effectiveness

The decreasing trends represent a significant savings in both dollars and personal suffering. Using the current cost of medication to treat uncomplicated gonorrhea, the reduction of 504 patients since 1978 amounts to a savings of almost $2,000 a year.

Because pelvic inflammatory disease is the overriding reason for controlling gonorrhea, data about cost savings related to GPID become extremely important. Recent information from Druid City Hospital indicates that it costs approximately $127 to diagnose and treat a patient on an outpatient basis.

A careful analysis of factors reveals a total annual saving of $33,725.56 from the costs of medication, cultures, treatments and outpatient costs.

Furthermore, this analysis represents only direct dollars. An intangible that is not easily measured is the cost incurred for fertility evaluation, adoption or artificial insemination techniques that frequently become necessary because of sterility caused by GPID.

Keeping in mind that approximately a third of these patients are Title XIX recipients, reduction activities are a direct cost-reduction tool to maximizing the use of the tax dollar in the short and long run.

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You Could Get Killed

Claude L. Brown, M.D.

Dr. Sam Hotchkiss, old friend, deliverer of my children, clung to the doorknob as if it were the Holy Grail.

"He's going to shoot me," wailed Sam. "Tonight. From ambush." He sweated, on that December day in my back doorway. My usually calm colleague was expecting imminent annihilation. Why?

Mrs. Jackson had been his patient for five years; during which time he had delivered her two babies; their relationship was one of entire professionalism. Mr. Jackson, however, out of his own psychopathology, had developed the delusion that his wife was having an affair with Dr. Hotchkiss. He had told the doctor vehemently that he, the aggrieved husband, was going to do something drastic about the situation.

The heroes of television, stern men, are rarely intimidated by verbal threats of violence; most of us weaker mortals listen rather attentively to such menacing announcements. My friend, Sam, had listened with increasing consternation. He argued logically with Jackson — to no avail; he became more upset and conveyed his anxiety to Jackson, who in turn grew more obstreperous. This miserable session ruined Sam's day, impaired his relish for supper, troubled his slumbers, and brought him to my office the next day.

Regardless of the nature of his practice, every doctor will usually find himself, on rare but memorable occasions, made acutely uncomfortable by the emotional aberrations of a patient (or a patient's relative). This is not surprising, since as physicians, we deal with ***people*** — and they come as assorted types.

Dr. Hotchkiss had taken the first proper step in handling his difficult situation: he had told someone about it. If you think that you may be physically attacked, shanghaied, blackmailed, or somehow sorely harassed, consider these maneuvers:

* A Mobile psychiatrist, Dr. Brown is a frequent contributor to the *Journal*.

I. Dilute the experience

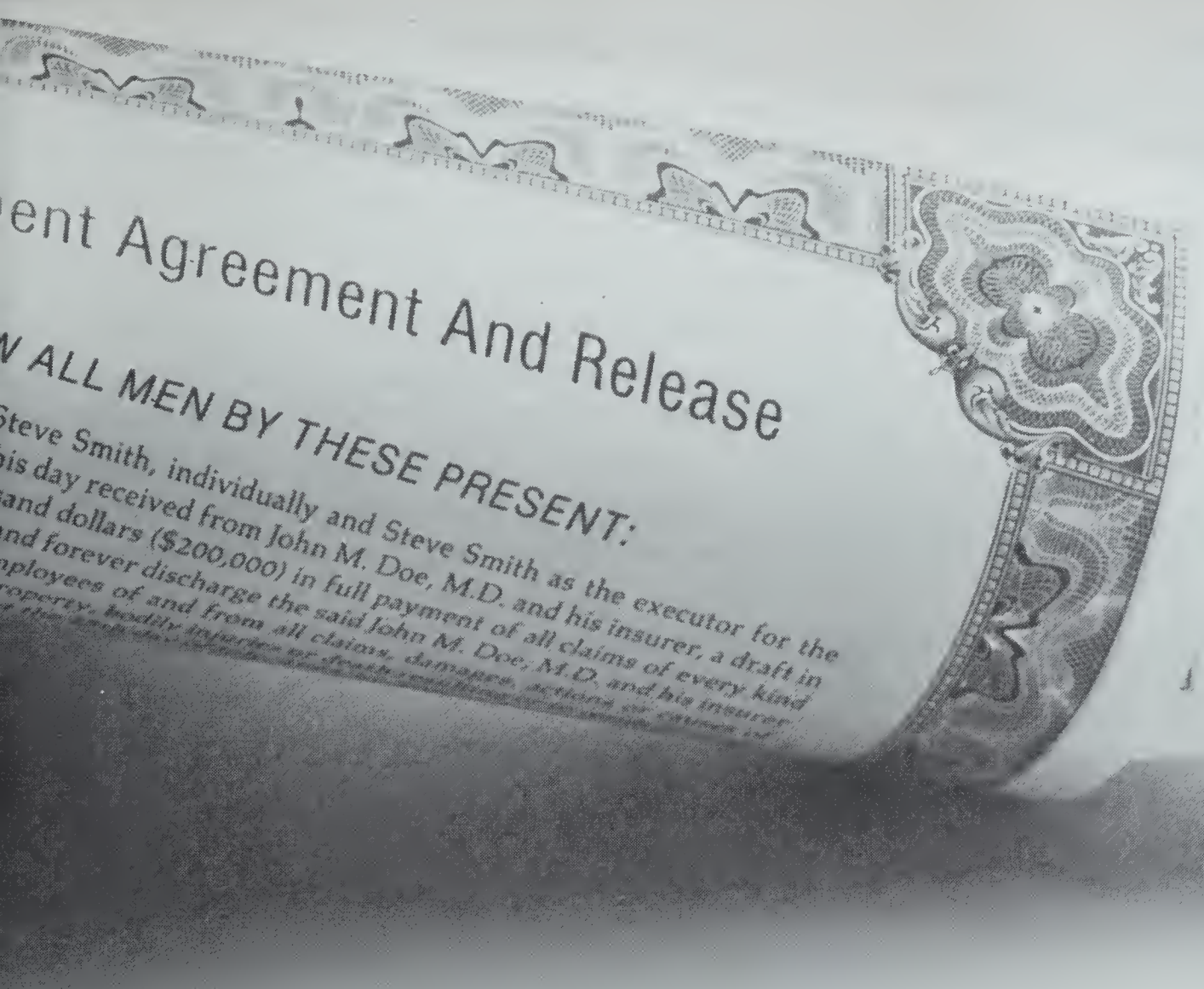
A. ***By telling the tale to a selected person.*** It is remarkable how often doctors hide from all view some dire threat to their well-being. They wrap their worry in silence; they confide in no one. It is certainly trite to say that most painful secrets are made less traumatic by relating them, yet physicians tend to clutch their dreadful treasures close to their bosoms. Perhaps the doctor thinks that to bring his anxieties to another person is a sign of weakness; perhaps he is sadly embarrassed; perhaps, from the tradition of confidentiality he is reluctant to narrate his ***own*** woes. Whatever the reasons, the doctor is apt to ponder his apprehensions alone. Don't do this. If you are distressed tell somebody.

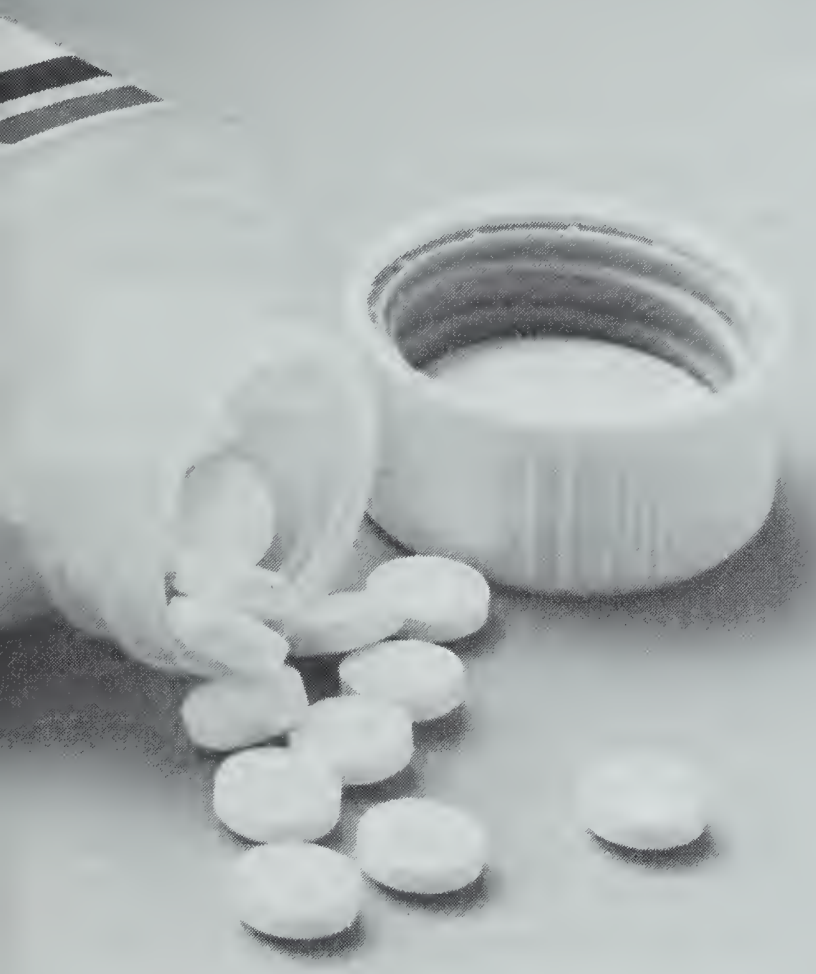
But select with care your confidant. Generally, the first person you tell should not be your spouse. Unless, by remote chance, he or she is a model of imperturbable serenity, the partner will be made uneasy by your story; this one's alarm, in turn, will make you more upset. There will be reverberations of anxious feelings, which helps no one.

A layman, no matter how trusted a friend or how intelligent, may not grasp all the implications of the doctor-patient relationship. Obviously, an indiscreet listener won't do. A colleague who dismisses you with a merry quip, or a "Well, we've all got our problems" is no aid. By this process, we arrive at he who will likely be your usual selection: a ***discreet, concerned colleague.***

B. ***By formal consultation.*** This may be part of, or a sequence of, Step A. In awkward or dangerous relationships with patients a consultation can be quite helpful. The other doctor, from his detached perspective, may make suggestions that had not occurred to you. The patient, of course, may resist consultation. If you are determined to have him see another doctor then don't waver in your insistence to him (and to his relatives). Two competent heads ***are*** apt to be better than one. And sometimes (don't count on this) the patient and the second doctor take kindly to each other, and


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what began as consultation ends as referral — a consummation devoutly to be wished for, if not expected. At any rate, consultation is nearly always reassuring. In mean situations one wants understanding.

C. ***By discussion with responsible relatives of the patient.*** This is often done, and often done wrong. The doctor, perhaps frightened, calls some relative of the patient — without the patient's knowledge. If you are treating a suspicious fellow who is frequently voicing his doubts concerning your sincerity, and if you then get his wife in and leave him in the waiting room, his imagination will not be strained to guess that you and his wife are talking about him. Or if you get one spouse in and tell him (or her) of your concern about the patient, meanwhile swearing said spouse to secrecy — then inevitably the patient quickly learns all about your furtive machinations and becomes even more distrustful and resentful of you. ***Always tell the patient.*** Circumstances alter cases, but keep in mind that in any kind of difficult ''showdown'' with a patient the presence of relatives, or some sensible third party, can be useful.

Dr. Robert Woolstone is an internist of special, but limited, abilities. At a glance he can differentiate galloping consumption from schistosomiasis, but personalities forever elude him. He is more than competent in pharmacology and physical diagnosis, but only doubtfully could he distinguish between the character structures of Sitting Bull and Joan of Arc.

He has an unrewarding penchant for injecting himself into the marital conflicts that he sees in his patients. He cherishes the sanctity of the home, the purity of women, and the efficacy of his own therapeutic zeal. With a triumphant instinct for the unworkable he totters blithely into many a cauldron. He lectures the embattled couple, telling them, in essence, that they just ought to be happy. That marriage is sacred, vows are registered in Heaven, and that one should seek no more the extra-marital Rose of Sharon. The warring partners hear none of this rubbish; they cling the more firmly to Woolstone, seeking solace, advice, valium. Finally, after the arena has become dusty and heated, he calls me, . . . ''another bad family situation, I'd been treating her for diabetes, got it well controlled. Then she started telling me how her husband stays out late, how she found lipstick on a shirt. So I've been talking to both of them. Tough problem.''

I say rapidly, ''Well, it was nice listening to you, Robert. And now, back to the ramparts.''

'' . . . wish you'd see him. They've been calling me at home, late at night. Fighting a lot, you know. Probably something psychiatric. He's kinda mad with me. No appreciation.''

Dr. Woolstone will get out of this mess, but he will probably get into others — soon. If he had treated only the lady's diabetes everyone, including himself, would have been much happier.

II. Be appropriate in your actions

A. ***Don't try to persuade anyone of your integrity.*** If a patient truly needs convincing in this sphere, then you can't demonstrate to him verbally that you're solid gold. Dr. Hotchkiss was dealing with such a person. The unstable, paranoid patient with his arbitrary judgement, fluctuating emotional attitudes, and tendency to cast the doctor into various roles is sometimes anxiety-provoking. He automatically puts the doctor on the defensive — and that's discomfiting. He questions the doctor's ability and sincerity (areas in which the doctor is ordinarily sensitive). Give him a brief statement of facts, no more. No salesmanship.

Don't be friendly with paranoid people. They are fearful of closeness, and react with heightened suspicion to efforts (which usually ***are*** insincere) aimed at friendliness. Cool, professional detachment, laconic and positive speech, are the watchwords. No buddy-buddy back-slapping.

B. ***Hit the ball.*** Focus on the issue with which you are most familiar; deal adequately with that, and forego extraneous ramblings. If you're treating Mrs. Baxter for nephroptosis, then sweat away at shoring up her kidneys, and leave her soul alone. This sounds like an ignoring of the ''holistic view,'' but in the patients considered here such a narrowed focus is often best. This limiting approach is reassuring to the patient — you're not monkeying around with his phobias, his loves and hates, or his wife. Dr. Woolstone may learn this: that unless one is a cast-iron masochist, armored by one's fantasies of Samaritanism, it is usually prudent not to be a peacemaker. True, minor problems of marital adjustment are often helped by the knowledgeable doctor. But with couples who make acrimony a career, contention a way of life — be wary. ***Don't be God.***

C. ***Watch for common traps.*** Many patients — the more emotionally perturbed they are, the more likely is this to occur — bring inordinate, confused demands to the doctor. You will occasionally be depicted by the patient as his only savior, your office the only oasis in a Sahara of smoldering rejection. Beware such a role — you are being set up as a patsy. The patient will soon find it necessary to cut you down from this exalted position.

You can unwittingly (like Dr. Woolstone) encourage excessive dependence upon you — and then be besieged by telephone calls, frequent unproductive office visits, and find your real effectiveness with the patient lost in a morass of recurring dramatic crises.

Disturbed patients can be disturbing. Doctors see many such patients. It is natural that such contacts cause anxiety in the doctor. This anxiety, plus his own needs, sometimes leads him into inappropriate byways. Such paths lead to more distress. Recognize these situations, limit their occurrence (they happen with all of us), and deal with them directly when they do arise. ⊡

Energy Cost of Ambulation With Canadian Hip Disarticulation Prosthesis

Chi-Tsou Huang, M.D.*

The energy cost of ambulation was measured on two middle aged males who underwent hip disarticulation secondary to traumatic injury and ambulated with Canadian hip disarticulation prosthesis with their own comfortable speed of walking. The result of the study indicated that they consumed the average of 2.3 fold increase of energy compared to their average resting metabolic rate with comfortable speed of walking of 13.4 meter/min. When compared with our earlier study they consumed 1.7 times more energy than our average above the knee amputees although the hip disarticulated subjects walker much slower. Their comfortable walking speed was only 28% of the average above the knee amputees.

Materials, Methods and Results

The successful results of surgical hip disarticulation or hemipelvectomy have been documented in medical literatures but less has been known about the energy cost of ambulation using Canadian hip disarticulation prosthesis. In this study the energy cost of ambulation with Canadian hip disarticulation prosthesis was measured on two post-traumatic hip disarticulated subjects ambulated with their own comfortable speed of walking.

The first case was a 46-year-old truck driver who was involved in a truck accident in September, 1978 resulting in severe compound fracture of right femur. He underwent right hip disarticulation one month later but subsequently he required multiple skin grafting procedures to his stump because of continuous break down. A Canadian hip disarticulation prosthesis was given in December, 1978 and he required only two weeks of gait training with his prosthesis before he became totally independent in ambulation using one Lofstrand crutch.

The second case was a 31-year-old truck driver who was involved in a truck accident in January, 1976 resulting in pelvic fracture, dislocation of left hip and comminuted fracture of left femur. He required left hip disarticulation in July, 1976 but he had never referred to us until May, 1982. A Canadian hip disarticulation prosthesis was given and he became totally independent in ambulation in seven days.

The study was conducted at Spain Rehabilitation Center. The test subject was asked to fast for 10 hours prior to the test. Informed consent was obtained from the patient and the testing procedure was fully explained to the patient a day prior to the test. The test subject was asked to ambulate 34 meter straight even floor for three times interspersed by 30 minutes of resting period between the test. The regular mouth piece and nose clip were used. The first case was tested

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on breath by breath basis using mobile automatic metabolic analyzer but the second case was tested using Douglas bag and Perkin-Elmer mass spectrometer. The metabolic analyzer was calibrated immediately prior to the test. The mean ambient temperature was 27°C and the mean barometric pressure was 744 mmHg.

Results

The result of this study showed that at resting state their average energy cost was 71.7 Kcal/hr and the oxygen consumption was 3.41 ml/kg/min. They actually ambulated 32.2 meter distance with average comfortable speed of walking of 13.4 meter/min. The average energy consumption during ambulation was 7.91 ml/kg/min which indicated that they consumed 2.3 fold increase in energy cost during the ambulation compared to their resting state. During the two minutes post-walk period they consumed the average of 128.5 Kcal/hr and at the end of two minutes they were still unable to return to the pre-test resting state metabolism.

Discussion

The development and the biomechanical function of Canadian hip disarticulation prosthesis was reported by Radcliffe[1] in detail. This prosthesis consists of a plastic molded laminated body and socket with free hip and knee joint without lock. The weight bearing line through the hip is posterior to the joint therefore automatically locking the hip and knee when the patient is in upright weight bearing position. The socket utilizes the ischial tuberosity on the amputated side to support the patient in the socket and the crest of ileum is used for suspension of the prosthesis. The details of surgical indications, techniques and the end results of hemipelvectomy and hip disarticulation were well documented by Gordon-Taylor,[2] Pack and Miller,[3] Ravitch and Wilson[4] and Higinbothom.[5]

The literature concerning the energy cost of ambulation with Canadian hip disarticulation prosthesis has practically no existence in the literature and also the literature concerning the application of prosthetic fitting and the end results of long range prosthetic rehabilitation has been varied. Poor result of rehabilitation was reported by Lewis and Bickel[6] who reported only two prosthetic users among 60 survivors. Douglas and his associates[7] concluded on the basis of 50 hemipelvectomized patients that the prosthesis was cosmetic rather than functional. On the contrary, better results were reported by Miller[8] who had 22 prosthetic users out of 32 hemipelvectomized patients and also by Watkins[9] who had 8 users among 10 survivors. Murdoch[10] reported the frequency of hemipelvectomy is one per million per annum and we believe the incidence of hip disarticulation could be more. Since the basic concept of fitting hemipelvectomized and hip disarticulated subjects are similar, with modern prosthetic aids we will be able to make these patients more independent of activity of daily living. It is our purpose to investigate the actual energy cost of ambulation by using this kind of prosthesis so that the comparison of metabolic demand can be done with other types of amputation. The result of this study was compared with our earlier study[11] which has been already published. It is our conclusion that this study illustrated the fact that they spent 130% more energy compared with their resting state and also they spent 1.7 times more energy compared to our average above the knee amputees with their comfortable speed of walking although their walking speed was only 28% of the average above the knee amputees.

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And what is more reassuring to an excessively anxious patient than medication that promptly starts to relieve his discomforting symptoms? Valium® (diazepam/Roche) begins working within 30 to 90 minutes. Patients continue to improve in just a few days, and relief continues throughout the course of treatment.

There are other important benefits with Valium as well—along with its broad clinical range, Valium has an efficacy/safety profile that few, if any, drugs can match. This record has been achieved with extensive clinical experience, undoubtedly including yours. And, as you must have observed, side effects more serious than drowsiness, fatigue or ataxia rarely occur. Nevertheless, as with any CNS-acting agent, patients should be cautioned about driving, operating hazardous machinery or ingesting alcohol or other CNS-depressant drugs while taking Valium.

Yet another benefit Valium affords is flexibility. Available in 2-mg, 5-mg and 10-mg scored tablets, Valium enables you to titrate dosage to individual patient needs. For the geriatric patient, a starting dosage of 2 to 2½ mg once or twice a day is recommended. And, for patients who forget or skip medication, you can prescribe Valrelease™ (diazepam/Roche) 15-mg slow-release capsules, knowing that Valrelease will assure all the benefits of Valium 5 mg *t.i.d.* with the convenience of once-a-day dosage.

Discontinuation of Valium (or Valrelease) is typically as smooth as its start in short-term therapy. However, Valium and Valrelease should be discontinued gradually after more extended treatment. As you diminish dosage, the built-in tapering action of Valium and Valrelease will help avoid rapidly recurring anxiety symptoms and symptoms of withdrawal, and will help ease the patient's transition to independent coping when therapeutic goals have been achieved.

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Valium® (IV)

diazepam/Roche

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For a summary of product information, please turn the page.

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Valium® (diazepam/Roche) Ⓝ Tablets
Valrelease™ (diazepam/Roche) Ⓝ slow-release Capsules
Injectable Valium® (diazepam/Roche) Ⓝ

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of anxiety disorders, or short-term relief of symptoms of anxiety. Anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic. Symptomatic relief of acute agitation, tremor, impending or acute delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: relief of skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome. *Oral forms* may be used adjunctively in convulsive disorders, but not as sole therapy. *Injectable form* may also be used adjunctively in: status epilepticus; severe recurrent seizures; tetanus; anxiety, tension or acute stress reactions prior to endoscopic/surgical procedures; cardioversion.

The effectiveness of diazepam in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindications: Tablets or capsules in children under 6 months of age; known hypersensitivity; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: As with most CNS-acting drugs, caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of predisposition to habituation/dependence.

> *Usage in Pregnancy:* **Use of minor tranquilizers during first trimester should almost always be avoided because their use is rarely a matter of urgency and because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

ORAL: Advise patients against simultaneous ingestion of alcohol and other CNS depressants.

Not of value in treatment of psychotic patients; should not be employed in lieu of appropriate treatment. When using oral forms adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may be associated with temporary increase in frequency and/or severity of seizures.

INJECTABLE: *To reduce the possibility of venous thrombosis, phlebitis, local irritation, swelling and, rarely, vascular impairment when used I.V.: inject slowly, taking at least one minute for each 5 mg (1 ml) given; do not use small veins,* i.e., *dorsum of hand or wrist; use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Injectable Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.*

Administer with extreme care to elderly, very ill, those with limited pulmonary reserve because of possibility of apnea and/or cardiac arrest; concomitant use of barbiturates, alcohol or other CNS depressants increases depression with increased risk of apnea; have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosage at least 1/3, administer in small increments. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs.

Has precipitated tonic status epilepticus in patients treated for petit mal status or petit mal variant status. Not recommended for OB use.

Efficacy/safety not established in neonates (age 30 days or less); prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence; can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of diazepam, *i.e.*, phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function; avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed and tolerated).

The clearance of diazepam and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.

INJECTABLE: Although promptly controlled, seizures may return; readminister if necessary; not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures; use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia; dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, observed in patients during and after diazepam therapy are of no known significance.

INJECTABLE: Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia.

In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm/pain in throat or chest have been reported.

Dosage: Individualize for maximum beneficial effect.

ORAL: *Adults:* Anxiety disorders, relief of symptoms of anxiety—Valium (diazepam/Roche) tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 Valrelease capsules (15 to 30 mg) daily. Acute alcohol withdrawal—tablets, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; or 2 capsules (30 mg) the first 24 hours, then 1 capsule (15 mg) daily as needed. Adjunctively in skeletal muscle spasm—tablets, 2 to 10 mg t.i.d. or q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily. Adjunctively in convulsive disorders—tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily.

Geriatric or debilitated patients: Tablets—2 to 2½ mg 1 or 2 times daily initially, increasing as needed and tolerated (see Precautions). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose.

Children: Tablets—1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use in children under 6 months). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose (not for use in children under 6 months).

INJECTABLE: Usual initial dose in older children and adults is 2 to 20 mg I.M. or I.V., depending on indication and severity. Larger doses may be required in some conditions (tetanus). In acute conditions injection may be repeated within 1 hour, although interval of 3 to 4 hours is usually satisfactory. Lower doses (usually 2 to 5 mg) with slow dosage increase for elderly or debilitated patients and when sedative drugs are added. (See Warnings and Adverse Reactions.)

For dosages in infants and children see below; have resuscitative facilities available.

I.M. use: by deep injection into the muscle.

I.V. use: inject slowly, take at least one minute for each 5 mg (1 ml) given. Do not use small veins, i.e., *dorsum of hand or wrist. Use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute Valium with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.*

Moderate anxiety disorders and symptoms of anxiety, 2 to 5 mg I.M. or I.V., and severe anxiety disorders and symptoms of anxiety, 5 to 10 mg I.M. or I.V., repeat in 3 to 4 hours if necessary; acute alcohol withdrawal, 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary. Muscle spasm, in adults, 5 to 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary (tetanus may require larger doses); in children *administer I.V. slowly*; for tetanus in infants over 30 days of age, 1 to 2 mg I.M. or I.V., repeat every 3 to 4 hours if necessary; in children 5 years or older, 5 to 10 mg repeated every 3 to 4 hours as needed. Respiratory assistance should be available.

Status epilepticus, severe recurrent convulsive seizures (I.V. route preferred), 5 to 10 mg adult dose administered slowly, repeat at 10- to 15-minute intervals up to 30 mg maximum. Repeat in 2 to 4 hours if necessary, keeping in mind possibility of residual active metabolites. Use caution in presence of chronic lung disease or unstable cardiovascular status. Infants (over 30 days) and children (under 5 years), 0.2 to 0.5 mg slowly every 2 to 5 min., up to 5 mg (I.V. preferred). Children 5 years plus, 1 mg every 2 to 5 min., up to 10 mg (slow I.V. preferred); repeat in 2 to 4 hours if needed. EEG monitoring may be helpful.

In endoscopic procedures, titrate I.V. dosage to desired sedative response, generally 10 mg or less but up to 20 mg (if narcotics are omitted) immediately prior to procedure; if I.V. cannot be used, 5 to 10 mg I.M. approximately 30 minutes prior to procedure. As preoperative medication, 10 mg I.M.; in cardioversion, 5 to 15 mg I.V. within 5 to 10 minutes prior to procedure. Once acute symptomatology has been properly controlled with injectable form, patient may be placed on oral form if further treatment is required.

Management of Overdosage: Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure; employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension. Dialysis is of limited value.

How Supplied:

ORAL: Valium scored tablets—2 mg, white; 5 mg, yellow; 10 mg, blue—bottles of 100 and 500; Prescription Paks of 50, available in trays of 10; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25 and in boxes containing 10 strips of 10.

Valrelease (diazepam/Roche) slow-release capsules—15 mg (yellow and blue), bottles of 100; Prescription Paks of 30.

INJECTABLE: Ampuls, 2 ml, boxes of 10; Vials, 10 ml, boxes of 1; Tel-E-Ject® (disposable syringes), 2 ml, boxes of 10. Each ml contains 5 mg diazepam, compounded with 40% propylene glycol, 10% ethyl alcohol, 5% sodium benzoate and benzoic acid as buffers, and 1.5% benzyl alcohol as preservative.

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Outpatient Surgery: A Proven Method of Cost Containment

E. Gaylon McCollough, M.D., F.A.C.S.*

In 1981 National Health expenditures amounted to approximately 10% of the gross national product, or $287 billion.[1]

Is it not surprising that from every phase of American business and government comes the cry to "do something" about escalating health care costs. The following is an example of how one physician has prevented an average of more than $40,000 per month from being added to those staggering national health care cost statistics.

The Problem

In a special edition of *The Newsletter* of the Jefferson County Medical Society, its president, Dr. William Leitner stated, "In 1980 the JCMS initiated a campaign to identify the factors affecting area health care costs and to develop cost-controlling strategies and mechanisms for implementation in the physician community." A special JCMS committee was established to study this problem. Dr. Leitner continued, "From its examination, the Committee observed that *traditional payment mechanisms do not promote efficiency* and that cost-plus mechanisms have an inflationary impact on health care costs."[2]

Although most physicians have not previously understood cost-plus hospital reimbursement contracts, we cannot afford to ignore the problem because our practice habits do effect the total dollars paid out. According to Health Care Financing Administration administrator Dr. Carolyne K. Davis, over 70% of all health care costs are controlled by physicians.[3]

One Solution

From January 1980 to August 1982, at the McCollough Facial Surgery Clinic, an ambulatory surgical facility in Birmingham, approximately 1400 surgical cases were performed on an outpatient basis. (See Table 1)

TABLE 1
McCOLLOUGH FACIAL SURGERY CLINIC, P.A.
OUTPATIENT (CLINIC) PROCEDURES (32 MONTHS)

Procedure	*Number*	*Percent*
Face lift	**275**	**21**
Blepharoplasty	**335**	**25**
Rhinoplasty	**225**	**16**
Hair transplant	**70**	**5**
Chemical peel	**108**	**7**
Dermabrasion	**75**	**5**
Other	**284**	**21**
	1,372	**100**

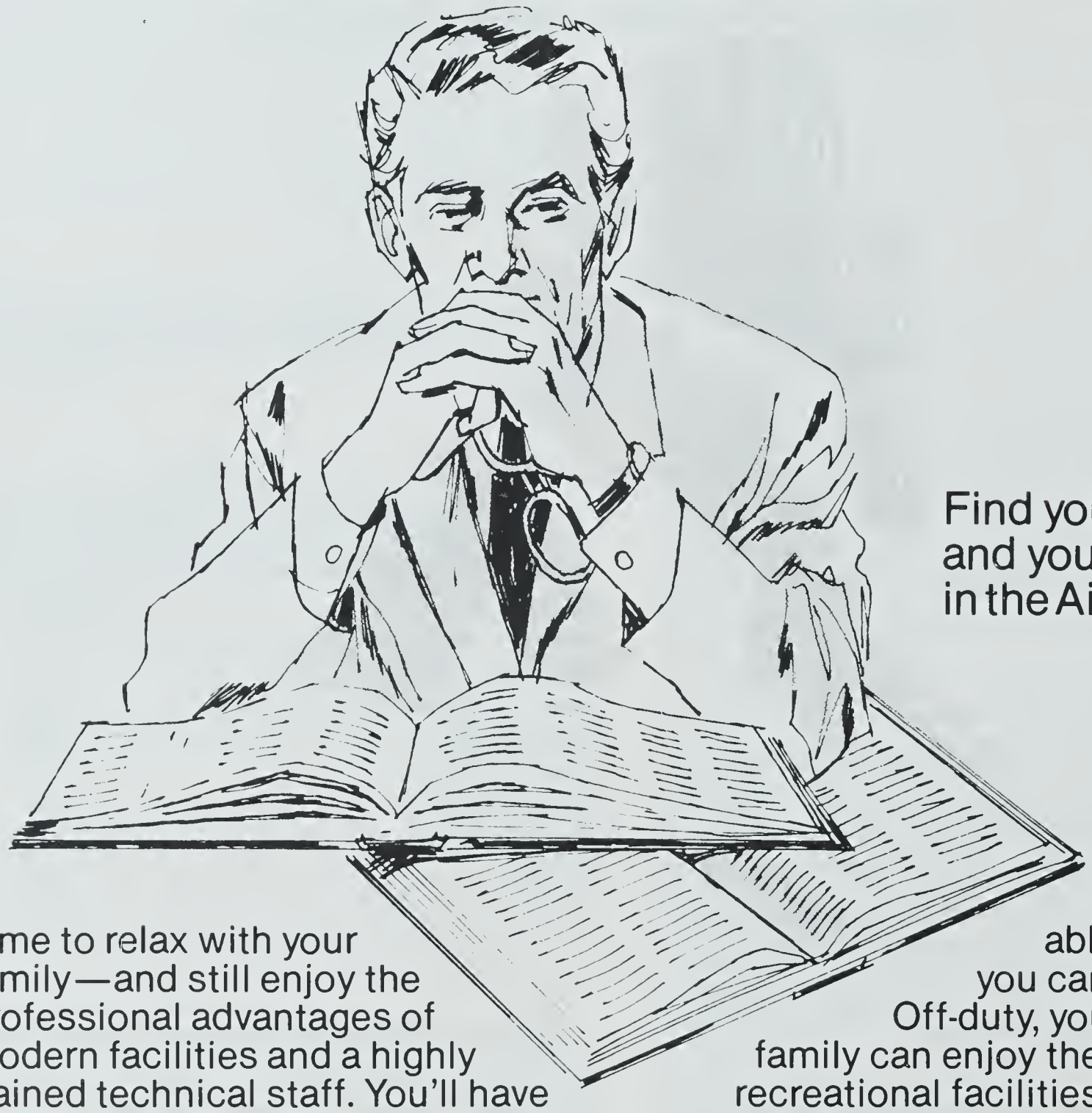
We have determined that our costs for the use of an operating room facility, recovery room, supplies, equipment, operating room staff and post operative care is approximately $300 per case at our Clinic. This accounts for the average savings of more than $1,000 for each case had the patient been hospitalized for the same 24 hour period and undergone the identical operation(s). These savings amount to over $40,000 a month or approximately $500,000 annually for our patient population.

Because of the very nature of our practice (primarily cosmetic plastic surgery of the nose, face, head and neck) many of the procedures we perform are *not* covered by third party payers except when the surgery has a functional or reconstructive component. Except in those two instances when hospitalized, the patient, not an insurer, pays for the hospital costs. These "item-

* 1516 South Twentieth Street, Birmingham, Alabama.

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ized'' costs usually exceed the ''per diem'' rates by several hundred dollars.

In our area of the state, the admission policy at most hospitals requires that the patient undergoing elective or cosmetic plastic surgery pays a ''deposit'' ranging from $1,000 to $1,500 prior to being admitted. In most institutions, anesthesia services are billed separately from the itemized hospitalization charges.

Patients who are considered to be in ''good health'' or who have no known serious medical problems are given a choice between hospitalization and outpatient surgery. It has been our experience that 99% of those given a choice prefer *not* to be hospitalized. When the costs of hospitalization adds $1,200-$1,500 to the overall costs of an elective surgical procedure many patients cannot afford the surgery they are contemplating. Remember, third party payers cover no medical expenses related to cosmetic plastic surgery.

We have performed surgery at our facility for the past seven years with a very high degree of success. There have been no deaths or major complications; our infection rate is less than 1% for all surgery we have performed.

Based on the available data, we estimate that we must have kept over 3 million dollars from being added to the cost figures of the health care delivery system during that seven year period. (Using an average of $1,000 per case.)

Table 2 represents the data from January, 1980 to August, 1982. Note that a total of 1,706 procedures were performed; eighty percent (80%) of these were done at our Clinic. The procedures included face lift, blepharoplasty, rhinoplasty, hair transplantation, chemical peel and dermabrasion.

TABLE 2
McCOLLOUGH FACIAL SURGERY CLINIC, P.A.
TOTAL PROCEDURES JAN. 1980-AUG. 1982
(32 MONTHS)

Location	*Number*	*Percent*
Clinic	**1,372**	**80**
Hospital	**334**	**20**
	1,706	**100**

Approximately 650 procedures per year

Most of the hospital based surgery included the same procedures. The majority of these patients were under the age of twenty, had some medical condition that we felt needed ''around the clock'' monitoring or preferred to be hospitalized.

We Can Learn From History

The concept of outpatient surgery is not new. Prior to 1950 many surgical procedures performed by medical subspecialists and general practitioners were performed in their offices.

When some third party payers began to *require* hospitalization and when hospitals began to cater to physicians, the profession moved toward inpatient care. As a result the current generation of physicians is more accustomed to hospital based practices. As a matter of fact, many now have their offices either within the hospital or in an adjacent professional building.

Because something must be done about rising health care costs and physicians must take the lead, the trend toward outpatient care must follow.

Like the earlier physician community the dental profession has continued to perform many surgical procedures in their offices under local and, occasionally, general anesthesia with a very high degree of success and an extremely low ''complication'' rate.

Physicians Hold the Keys

In recent years, hospital based medical care costs have escalated to the point that both the federal and state governments, as well as, private business and industry have become deeply concerned. All are now actively involved in preparing to do something about it with or without the medical profession's participation.

Referring to hospital's business approach to medicine, Dr. Ronald Henderson, MASMA's president has said, ''Physicians still hold the keys. Unless they reject (hospital's) entrepreneurialism physicians risk losing the public's confidence and medicine could lose its function as an independent and self-regulated profession.[4]

We can not ignore our role in contributing to this problem. We alone control who is admitted to the hospital, for how long, and indirectly how much money is spent while our patients are there. Regardless of our level of unawareness concerning current hospital costs, we will continue to receive the brunt of the criticism because, at least for the present, we still have control of admissions, discharges and other services which we order.

Who Works for Whom?

According to AMA data, over 190,000 of the 307,000 physicians engaged in patient care have some form of contractual relationship with a hospital. More than one-half of these physicians are on a full-time salary.[5] As more physicians follow the trend to become employed by hospitals, we may ultimately lose some degree of controll of our patients and of our own destiny. The entity that pays us controls us. We must not turn our heads and *hope* that the current trend will disappear.

Care Effective Services

Americans simply cannot afford hospital-based cost-plus reimbursement. We do have some viable alterna-

tives. Outpatient care in our own facilities will protect the freedom of choice for our patients and for ourselves plus allowing us to have a direct impact on keeping costs in line.

No one would recommend sacrificing quality, therefore, it is necessary for us to take appropriate steps to deliver safe, effective medical and surgical care on an outpatient basis. Therefore, we must accept the responsibility to insure that the services we provide are delivered in the most economical and efficient fashion possible but with a basic premise that our primary objective is to provide ''care-effective'' medical services that are also cost-efficient.[6] Our experience at the McCollough Facial Surgery Clinic proves that this can be done.

In a Spirit of Competition

Competition is healthy. When the trend toward outpatient care becomes a reality, hospitals will again do whatever is necessary to encourage physicians to use their institutions. Most likely more ''one day surgery units'' and outpatient laboratory and radiological services at competitive prices will emerge.

The United States Health Care Financing Administration supports such a concept. In her address to the Physician-Hospital conference in Birmingham, Dr. Carolyne K. Davis said, ''We simply hope to instill changes that will encourage cost sensitivity, that will give people an economic reason to seek less costly care that *will reward providers who are the most cost effective*.''[7]

In order for hospitals to compete with ''care-effective'' outpatient services costs for inpatient services will, by necessity, be looked at more carefully, and change will follow.

Summary

The available data supports the fact that quality outpatient medical care is a proven method of cost containment. With the current price structure the costs of outpatient services when delivered by the private practitioner can be substantially less than when the same services are rendered by hospitals on an ''inpatient basis.''

We hope that by sharing our seven year experience with Alabama physicians, others might be encouraged to reaccess current practice habits.

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Mrs. Julius E. Dunn, Jr.
President, A-MASA

It is well known that the Triple A (AAA) symbolizes help for the motorist, but for the Alabama Medical Auxiliary it means ACTION. For us the acronym AAA stands for *A*labama *A*uxiliary in *A*ction. Action is the dynamic force which has kept our organization vital and new in the past. As we plan for the future, action will be more than engaging rhetoric. It will be our commitment. Action according to the dictionary is synonymous with achievement, accomplishment, fulfillment, activity and performance.

Under the able leadership of Mrs. Patty Estock, and the other notable state presidents, the Alabama Auxiliary has a record of achievement as we operated in partnership with MASA. The action of our auxiliary is exemplified in the fact that our membership has increased each year for seventeen consecutive years! No other state can boast of this achievement. Much of the credit for the increased membership is due to the efforts of the county auxiliaries and their outreach to eligible members at the local level.

Our auxiliary members are talented individuals with a wide variety of interests. These multiple talents and interests have been focused on action projects related to current health problems.

Self-destructive lifestyles have become an urgent concern of the auxiliary. Illnesses caused by drugs, alcohol, smoking and diet are preventable. Education of the population to the hazards and long range problems incurred has been an integral part of the ''Substance Abuse'' project which many auxiliaries have undertaken.

The ''Infant Car Seat Restraint'' program has been initiated by auxiliaries in several counties. The goal of this project was to provide car seats for newborn infants upon leaving the hospital. The coalition of other interested associations and persons with the auxiliaries has made a tremendous impact on the fulfillment of this goal.

The Alabama Auxiliary has taken action in assisting medical students and their spouses. The American Medical Association-Education and Research Foundation (AMA-ERF) has helped to ''fill the gap'' when unexpected expenses have come along in medical school. Our gifts to the schools have been most generous and show our appreciation for the excellent education our medical students are provided in Alabama.

The ''Organ Donor'' program is comparatively new, but is gaining momentum. It recently received a tremendous boost when Coach ''Bear'' Bryant donated his eyes. It was further promoted when it was learned that Prince Charles is planning to be an organ donor. Because of the many lives that can be saved and enriched by unselfish organ donors, this project has unprecedented potential.

The Auxiliary's Legislative Committee is planning a ''Day in the Legislature'' in May so that we, together with our spouses can meet our Legislators and let them know that we support them in enacting health legislation that will better serve the people of Alabama.

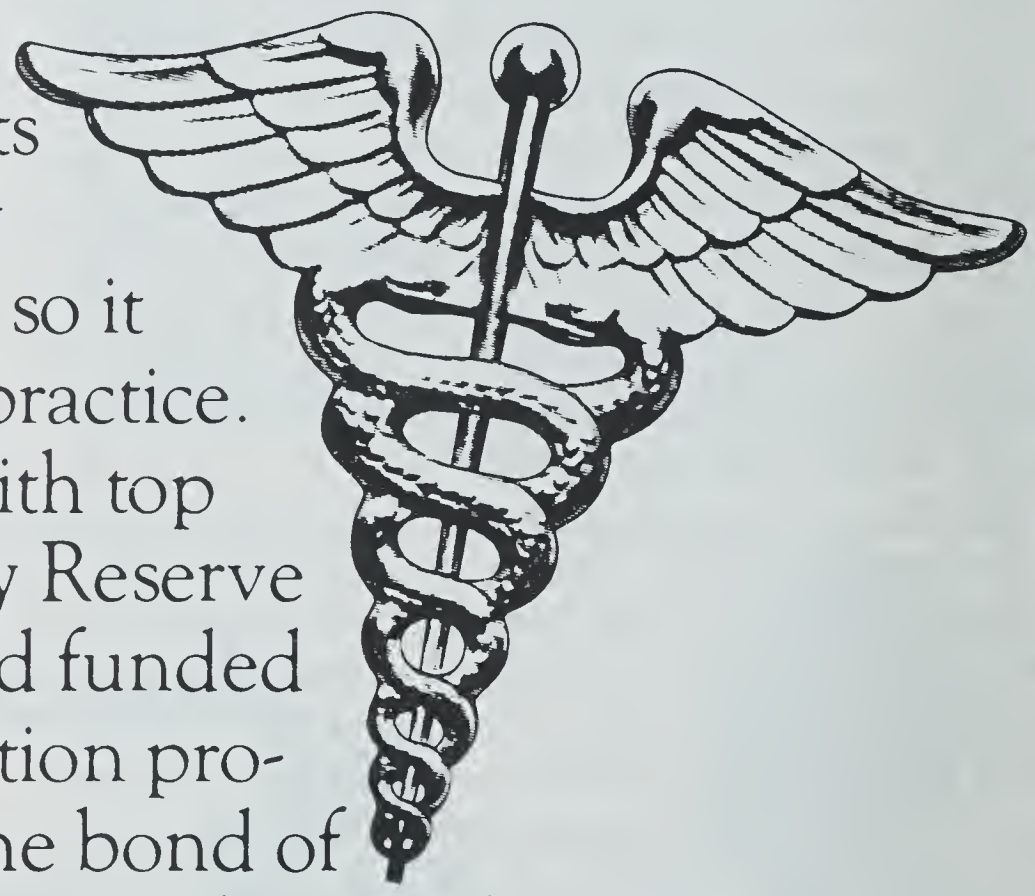
Thus actions and achievements of many others are the legacy of the Alabama Auxiliary. As I begin my term as State President, I salute the past as a proud heritage upon which to build for the future as we seek to improve the health of the people of Alabama. As volunteer partners with our spouses, may we have a sense of history in recognition of the accomplishments of the past and may we sharpen our vision of what we can achieve in the future. Through our combined efforts (and with God's help) we have unique opportunities to inter-relate medical technology with moral and ethical issues of humanity and thus improve the quality of life as well as to lengthen the life span.

In the years ahead, let us continue and extend our achievements by keeping the *A*labama *A*uxiliary in *A*ction — a triple A which is an acronym uniquely ours as we act in a planned way to improve the health of people throughout our State! ⊡

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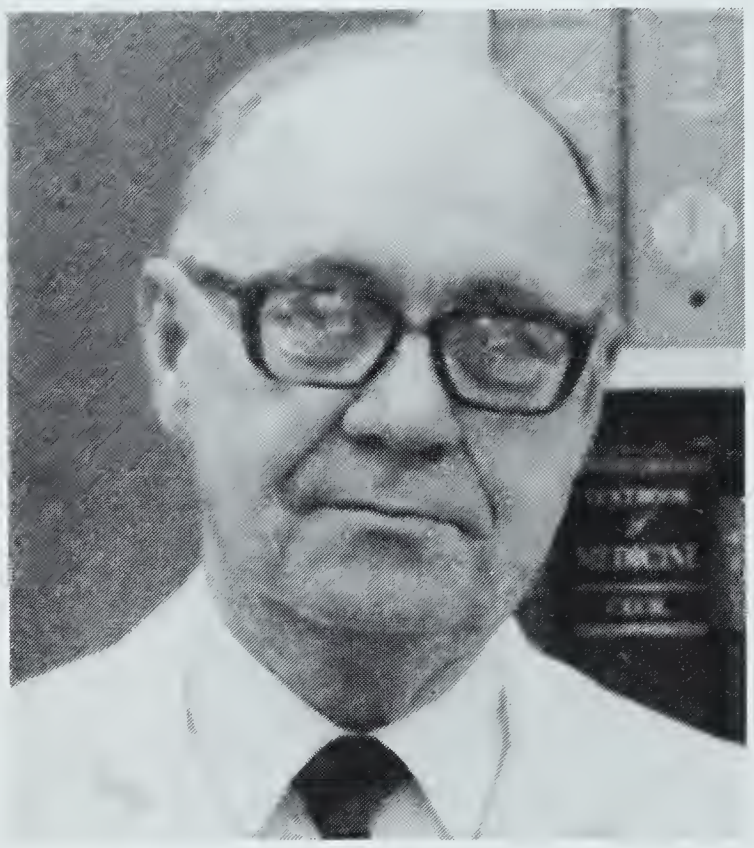
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CEPHALOSPORINS AND COST CONTAINMENT

Page 7

"THE PHYSICIAN IS A DECISION MAKER, AND ALMOST EVERY DECISION HE MAKES COSTS OR SAVES MONEY."

—Dr. William Felts, Past President, American Society of Internal Medicine



More and more physicians today are beginning to realize the extent of the economic influence they have, and are finding ways of holding costs down.

A number of studies show that the more physicians *know* about costs, the more they try to *reduce* them.* And this reduction can be done without reducing the quality of care to the patient.

How are they doing this? As a start they have become thoroughly familiar with the costs they incur on behalf of their patients. They know how much an X-ray costs, how much their hospital charges for routine lab tests. They're requesting copies of patients' hospital bills. And asking their hospitals to print the charges for diagnostic tests right on the order sheet.

What else are physicians doing? Minimizing their patients' hospital stays, whenever possible. Reevaluating routine admissions procedures. Questioning the real need of the diagnostic tests they order for their patients. Avoiding duplicate testing. Trying to discourage their patients' demands for unnecessary medication, treatment or hospitalization. Compiling daily logs of their medical decisions and what they cost. And more.

More physicians today realize what a tough problem we're all faced with. They know this is a challenge for medicine. And that physicians are in the best position to deal with and solve the problem.

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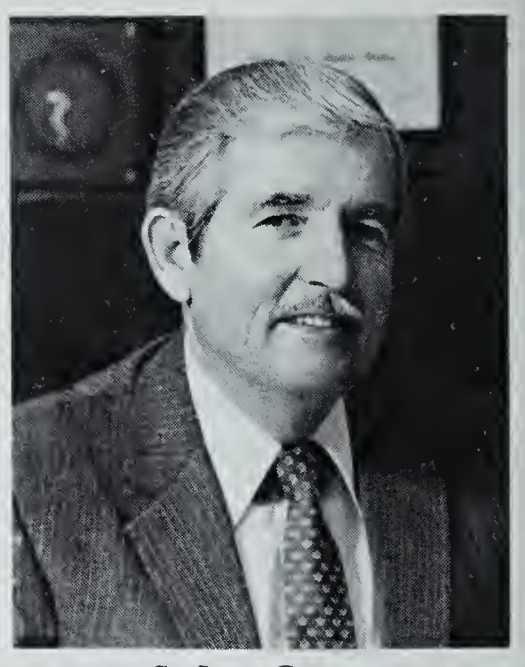
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EXECUTIVE DIRECTOR



S. Lon Conner
Executive Director, MASA

Thinking the Unthinkable

In April, the College of Counsellors and House of Delegates briefly considered, then carried over, a proposition that has been the subject of informal discussion for some time — divesting the Association of its oversight authority over the State Department of Public Health.

Should that happen, the College of Counsellors and House of Delegates would no longer sit one day a year as the Board of Health, as it has since the latter part of the 19th century; nor would the Board of Censors don its monthly hat as the principal component of the State Committee on Public Health.

In short, the Association would relinquish its public health role, one which it has performed with unparalleled dedication and distinction for more than a century.

The reasons for the suggestion to end this historic relationship are many. Not least is the frequency with which this role of the Association complicates both offensive and defensive legislative efforts at the State Capitol in Montgomery. Additionally, this role has been part of the target of expeditions by the Feds. And, one way or another, it comes up in relations between physicians and hospitals, and between the Association and elected officials.

More often than the Board of Censors would care to recall, the State Committee function has complicated its business of attending to the needs of the membership and giving priority to their interests.

The two roles performed by the Board — representing the members and representing the public — create a potential conflict-of-interest situation. That the Board has handled this delicate balance with tact and precision is an amazing fact. But often, in one capacity or the other, the Board is handicapped in the decision-making process by the other hat it wears.

That is to say, sometimes the Board, in its zeal to avoid entanglement in anything remotely suggesting a conflict of interest, has simply found the right decision foreclosed to it.

This is basically the case for divestiture. The case against it is, first of all, historic: The Association was formed as much to propagate the principles of public health as it was as a body representing the membership. In those early years in the last century, the Association's work was sometimes almost entirely in the public interest — whether in advocating stronger health laws or in protecting the gullible from the profusion of quacks swarming over the landscape.

The great epidemics, the childhood diseases, the deplorable absence of sanitation, public and political ignorance of and even hostility to scientific measures — all these have largely vanished, thanks to vaccines, modern sanitation and general enlightenment.

Some physicians believe the continued command and control role in public health has long since become an archaic hold-over from an earlier day, and that the many costs of the role are no longer justified by the shrinking benefits. But others point to the pragmatic argument: if physicians didn't control public health, who would and with what results?

In any case, it was the consensus of the business session in Birmingham that Counsellors and Delegates begin discussions of the pros and cons, looking toward some future action, possibly by a special called meeting before annual session 1984.

Several considerations should figure in these deliberations: Is it worth it to endure the frequent criticisms from press, public and political leadership that "doctors run everything in Alabama"? Is it worth it to have our legislative efforts constantly answered with the

continued on page 44



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CONTRAINDICATIONS: Patients hypersensitive to ibuprofen, or with the syndrome of nasal polyps, angio-edema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory drugs (see WARNINGS).

WARNINGS: Anaphylactoid reactions have occurred in patients hypersensitive to aspirin (see CONTRAINDICATIONS). Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration, perforation, or gastrointestinal bleeding can end fatally, however, an association has not been established. Rufen should be given under close supervision to patients with a history of upper gastrointestinal tract disease, and only after consulting the ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be attempted. If Rufen must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

PRECAUTIONS: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If developed, discontinue Rufen and administer an ophthalmologic examination.

Fluid retention and edema have been associated with Rufen; caution should be used in patients with a history of cardiac decompensation.

Rufen can inhibit platelet aggregation and prolong bleeding time. Use with caution in patients with intrinsic coagulation defects and those taking anticoagulants.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy, this therapy should be tapered slowly when adding Rufen.

DRUG INTERACTION: *Coumarin-type anticoagulants*. The physician should be cautious when administering Rufen to patients on anticoagulants.

Aspirin. Concomitant use may decrease Rufen blood levels.

PREGNANCY AND NURSING MOTHERS: Rufen should not be taken during pregnancy nor by nursing mothers.

ADVERSE REACTIONS: **Incidence greater than 1%. Gastrointestinal**: The most frequent adverse reaction is gastrointestinal (4 to 16%). Includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of GI tract (bloating and flatulence). Central Nervous System: dizziness*, headache, nervousness. Dermatologic: rash* (including maculopapular type), pruritus. Special Senses: tinnitus. Metabolic: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS). *Incidence 3% to 9%.

Incidence less than 1 in 100. Gastrointestinal: gastric or duodenal ulcer with bleeding and/or perforation, hemorrhage, melena. Central Nervous System: depression, insomnia, confusion, emotional lability, somnolence, aseptic meningitis with fever and coma. Dermatologic: vesiculobullous eruptions, urticaria, erythema multiforme, Stevens-Johnson syndrome and alopecia. *Special Senses:* hearing loss, amblyopia (blurred and/or diminished vision, scotomata and/or changes in color vision) [see PRECAUTIONS]. Hematologic: neutropenia, agranulocytosis, aplastic anemia, hemolytic anemia (sometimes Coombs' positive), thrombocytopenia with or without purpura eosinophilia, decreases in hemoglobin and hematocrit. Cardiovascular: congestive heart failure in patients with marginal cardiac function, elevated blood pressure. Allergic: syndrome of abdominal pain, fever, chills, nausea and vomiting, anaphylaxis, bronchospasms (see CONTRAINDICATIONS). Renal: acute renal failure in patients with preexisting significantly impaired renal function, decreased creatinine clearance, polyuria, azotemia, cystitis, hematuria. Miscellaneous: dry eyes and mouth, gingival ulcers, rhinitis.

Causal relationship unknown. Gastrointestinal: pancreatitis. Central Nervous System: paresthesias, hallucinations, dream abnormalities, pseudotumor cerebri. Dermatologic: toxic epidermal necrolysis, photoallergic skin reactions. Special Senses: conjunctivitis, diplopia, optic neuritis. Hematologic: bleeding episodes. Allergic: serum sickness, lupus erythematosus syndrome, Henoch-Schonlein vasculitis. Endocrine: gynecomastia, hypoglycemia. Cardiovascular: arrhythmias (sinus tachycardia, bradycardia, and palpitations). Renal: renal papillary necrosis.

OVERDOSAGE: Acute overdosage, the stomach should be emptied. Rufen is acidic and excreted in the urine, alkaline diuresis may benefit.

DOSAGE AND ADMINISTRATION: Rheumatoid arthritis and osteoarthritis, including flareups of chronic disease: Suggested dosage 400 mg t.i.d. or q.i.d.

Dysmenorrhea: 400 mg every 4 hours as necessary.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for the relief of pain. *Do not exceed 2,400 mg per day.*

CAUTION: Federal law prohibits dispensing without prescription.

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PRESIDENT'S PAGE



H. Hamilton Hutchinson, M.D.
President, MASA

Cephalosporins and Cost Containment

At this writing, PPOs, DRGs, and the threat of legislation influencing medical liability are of paramount concern. Since they are all intimately related to cost containment, however, the second of the initially proposed anonymous articles appears on page 9 as planned.

This is a composite of comments solicited from pharmacists in several communities. You may not concur in toto, but I hope you will find the article provocative.

The emphasis on antibiotics, especially cephalosporins, is appropriate. Antibiotics count for approximately one-half of the pharmacy budget, and im one respondent's hospital exceeded $700,000 annually. It has been further estimated that of the fifty percent spent on antibiotics approximately half of this applied to cephalosporins. And further, one-half of these cephalosporins were used as prophylactics at the time of "clean" surgery. Thus it would be prudent for each hospital staff to evaluate its surgical prophylactic antibiotic prescribing habits. It is generally held that failure to give the peritoneal antibiotic at least thirty to sixty minutes pre-op sharply compromises its purpose and in addition to continue its use more than 24 or at most 48 hours post-op is unnecessary. More importantly than cost, this often will free the patient from an IV line, and its attendant pain, limitation of ambulation, and potential increased risk of drug reaction, etc.

The pharmacist's list of various costs and his practical observations as to the effect of the timing of our order changes are enlightening. Expressed in another manner in Table 1 and Figure 1 taken from *JAMA*, March 11, 1983, Vol. 249, in an article by Shapiro, "Benefit Costs of Antibiotics Prophylactic," it is apparent that utilization of third generation cephalosporins and duration of treatment longer than three doses for vaginal and abdominal hysterectomies result in no net benefit.

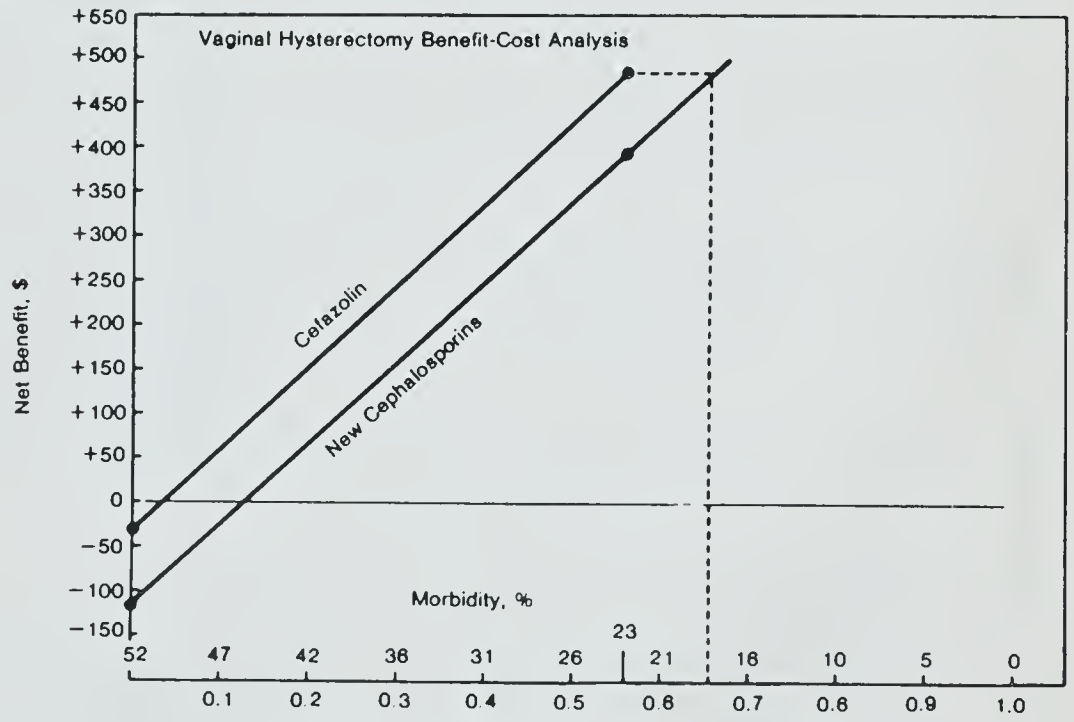


Figure 1. — Benefit-cost analysis of prophylaxis for vaginal hysterectomy under assumption that cefazolin and the newer cephalosporins have equivalent preventive fractions. In clinical trial, placebo morbidity rate (see text) was 52% and preventive fraction of cefazolin was 56% (morbidity rate, 23%). Dotted line indicates that preventive fraction of newer cephalosporins would have to be 65% (morbidity rate, 18%) to engender the same savings ($485 per patient) as with cefazolin.

A study was done at St. Mary's Hospital of the Mayo Group in Rochester in '80 of the antibacterial spectrum and the cost of first generation cephalosporins. As a

continued on page 44

DR. COLLINS ISN'T PAYING HIS MALPRACTICE INSURANCE PREMIUM THIS YEAR.

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The View From the Pharmacy

The first installment of these articles, drawn from anonymous critiques of physicians and medicine, appeared in the *Journal* last month. It was devoted to the shortcomings of medicine as perceived by patients. The following installment, second in the series, was put together from contributions offered by pharmacists. Whereas the first installment contained material reflecting public attitudes, this installment is confined mainly to cost containment ideas from within the "health care industry." As presently envisioned, the July installment will be devoted to observations by nurses and inhalation therapists.

"New cephalosporin antibiotics have greatly increased the costs of hospitalization, without necessarily improving health care on a dollar-for-dollar basis."

So begins one of the anonymous contributions to this series, this from a hospital pharmacist, who went on to note:

Many times the older, less expensive drugs, such as ampicillin, could have been judiciously used with just as good results, thereby holding down hospital costs."

Our contributor described a typical Alabama hospital (possibly his, possibly not) spending an average of $12,000 per month on cephalosporins, "about one-third of the hospital pharmacy's total purchasing budget."

He went on to observe that a 1 gram vial of ampicillin cost the hospital (in 1983) $1.21. An 80 mg. vial of Gentamicin was 88 cents; while the first generation cephalosporin, Cefadyl, cost twice as much; Ancef, 3 times; Mandol, a second generation cephalosporin, almost 5 times; and Calforan, a third generation cephalosporin, was $11.45 a gram, or almost 10 times as costly as ampicillin.

"One suggestion to lower this type of hospital drug cost would be for physicians to use their hospital laboratory's culture and sensitivity reports in a more discriminate manner," the pharmacist continued. "Use a less expensive drug that will do the same job for the indicated organism."

He then suggested average doses, subject to variance according to the severity of the patient's infection, renal function, drug sensitivity, etc.:

Ampicillin: 500 mg. to 1 gram every 6 hours;
Gentamicin: 60 to 80 mg. every 8 hours;
Cephapirin (Cefadyl): 500 mg. to 1 gram every 4 to 6 hours;
Cefazolin (Ancef, Kefzol: 500 mg. to 1 gram every 6 to 8 hours
Cefamandole (Mandol): 500 mg. to 1 gram every 4 to 8 hours
Cefatoxime (Claforan): 1 gram every 6 to 8 hours.

Another pharmacist suggests that time and money could be saved by the more effective use of "piggy-back" and other add-a-line medications. He writes:

"The pharmacy mixes piggybacks for all units in the hospital except the critical care units.

"The main batches are made each day. The first batch is made in the morning at about 10 a.m. All bags due by 6 p.m. are made at this time. The second batch is

prepared in the afternoon around 4 p.m. In this batch, the bags due from 6 p.m. through 11 a.m. the following day are prepared. New orders which are written during the day are made whenever they are needed. Any new orders for piggybacks written after 11 p.m., when the pharmacy closes, are dispensed out of night pharmacy by the night supervisor and mixed on the nursing unit.

''When a piggyback order is discontinued or changed to a different drug or strength, any doses already mixed must be charged to the patient unless the bag can be used on another patient receiving the same drug.

''If the pharmacy could receive the 'D/C' or revised order before the main batches are prepared, then the patient would not be charged for a dose he did not receive.

''Sometimes a physician will specify on the order sheet to 'D/C' the I.V. piggyback after the doses have already been mixed or are infused. This will also save the patient money when giving the last doses I.V. piggyback is feasible.''

Another comment by yet another pharmacist is that physicians could assist the pharmacy in holding inventory levels as low as possible by using only medications usually stocked by the pharmacy, when possible.

''In some cases, the pharmacy is requested by physicians to order a drug not normally stocked. Many times, minimum orders are required by manufacturers and, in some cases, must be ordered on a non-returnable basis. This sometimes results in a drug being left on the shelf after being used one time, until it reaches expiration date. Then it must be discarded.

''Realizing this, the physician might, many times, conclude that another drug will do the job, and after carefully assessing the cost/benefit ratio would make the decision not to order the more expensive drug.''

Two other ideas are offered by another pharmacist:

''1. Vivonex HN Orders. Do not change the rate of flow or schedule except once a day, and that should be done before 10 a.m. The reason is that the mixture has to be remade and therefore the patient is charged up to twice the amount used. *The cost of Vivonex HN is about $140-$200 per day per patient.*

''2. TPN Orders. Any time a drug is deleted or decreased from the TPN means the solution will have to be remade. Example: decreasing the amount of insulin or d/c of electrolytes. Remaking the solutions causes an expense to the patient because they are seldom re-used. When possible, make changes before 10 a.m. or allow any changes to take place beginning with the next day's orders. *The cost of TPNs is between $200 and $400 per day per patient.*''

The last pharmacist/contributor expresses a certain hesitancy to criticize because there is, he says, ''a lot more right than wrong with medicine in Alabama today.'' But, told to speak his mind, he touched on an area not approached by the other pharmacists — doctor-patient-pharmacist communication.

''Pharmacists see patients,'' he writes, ''at seven times the frequency of the physician.'' Although the contact is very different, pharmacists do get much of the criticism that is actually directed at the physician's office, he says:

''Many patients say their questions are not answered. Some feel that the doctor doesn't consider their understanding is important enough to warrant the time for an explanation; while others feel the doctor thinks the patient is not equipped to understand. There are others who think this evasion is a coverup for the doctor who is afraid to admit that he does not know.''

Although a pharmacist is reluctant to tell physicians how to run their offices, he continues, he suggests doctors should re-evaluate their telephone screening and try to return more calls on a timely basis:

''Sometimes it seems to the patient, and to the pharmacist, that the physician just doesn't care, especially when the physician limits his calls to emergencies.

''Pharmacists like the fast way nurses and receptionists relay refill authorizations. But the pharmacist is occasionally in need of the physician's help in clarifying a prescription, for advice about a patient's condition, or for other professional consultation.

''The pharmacist appreciates this opportunity, enjoys being called upon by the physician, and likes to feel free to call on the physician about the patient's apparent needs, whether clinical or economic. . . .

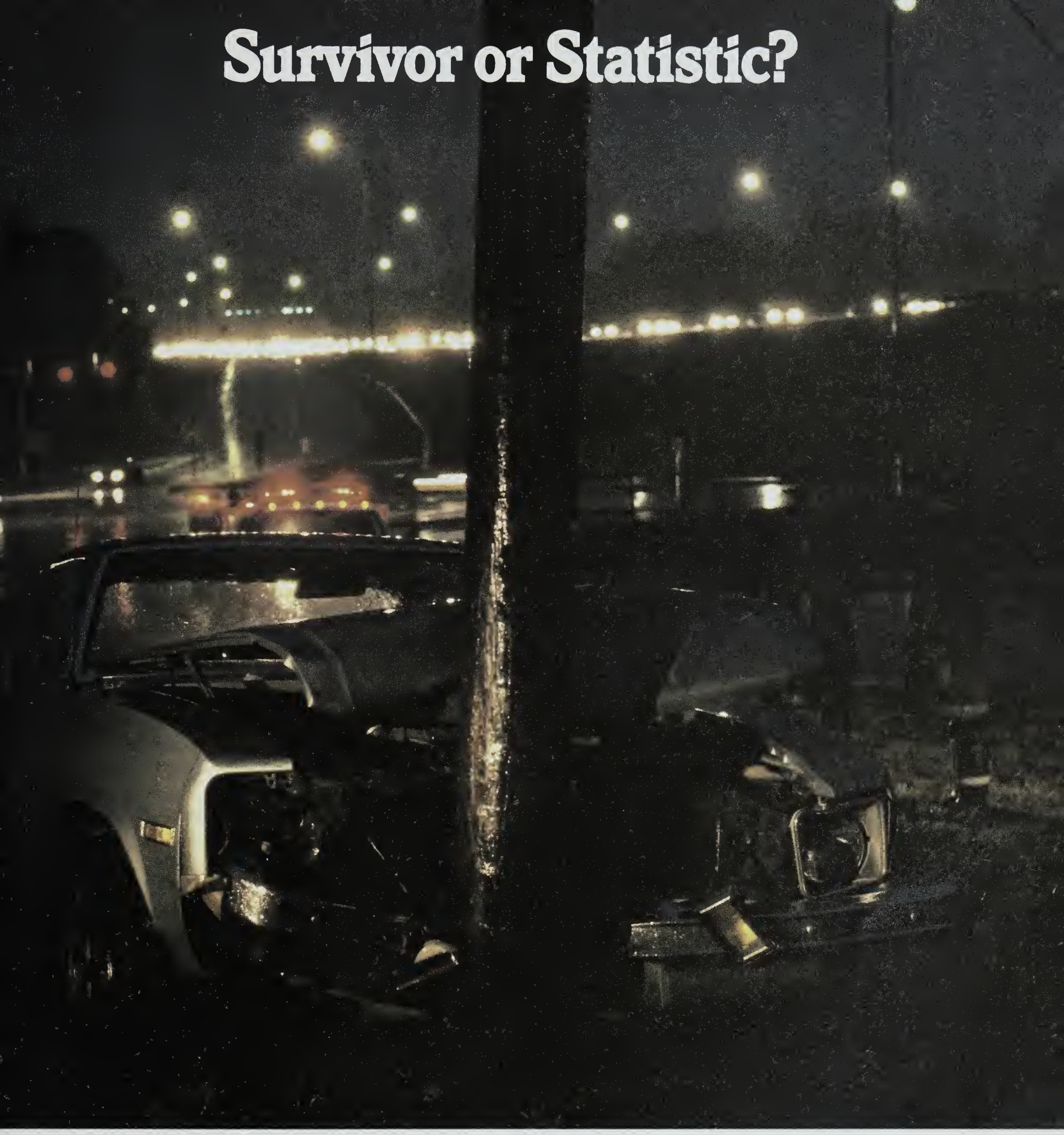
''There are doctors' offices, just as there are drug stores, where more consideration is needed for the patient's economic status.''

This pharmacist concludes by saying that needless misunderstandings frequently occur between physician, patient and pharmacist simply because, at some point, no one took the time to answer questions, with a consequent detriment to all three. When communication is present, all benefit, he says.

While small towns have little of this problem, he says, in the larger towns it often happens that doctor, patient and pharmacist are unknown to each other. In the large metropolitan areas, an occasional joint meeting between physicians and pharmacists might be helpful, he says.

It seems obvious from the above, as from the preceding article and those to follow, that many conscientious people at all levels of care have already given a lot of thought to both the quality of care and cost containment.

In too many instances, it appears, their insights have not been solicited, and may even be resented at other levels. ⊡



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Projecting Alabama's Future Supply of Physicians

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A study conducted at the University of Alabama over the past two years aimed at determining the extent to which characteristics of Alabama physicians compared with nationally accepted recommendations and projections of future physician need. A major purpose of the study was to begin to gather locally relevant data that could be used to arrive at valid policy decisions concerning health manpower and, by extension, health care delivery.

A previous paper† described some current practice characteristics and distributions of Alabama physicians that were identified in the two-year study. This paper develops some basic projections of the future supply of physicians in the state.

National Requirement Projections

Accurate projections of requirements and supply of physicians for the future are essential for determining physician manpower policy by federal and state governments, and many other organizations. Several major national studies have recently attempted to provide this information.

The Bureau of Health Manpower (within the Department of Health and Human Services) projected a national physician need for the year 1990 based on a model which incorporated expected changes in the population, the future economic status of different population groups, and their expected rates of utilization or purchase of physician services, i.e., an estimate of the number of physicians needed to provide the medical services likely to be purchased by the future population.[1] Included in their "effective economic demand model was a measure of physician productivity (the amount of service each can provide). The BMH estimated the U.S. physician requirement to be 415,000 in 1990 if current utilization rates do not change, or 600,000 physicians, if demand for medical services increased by 10 percent from a 1975 baseline.[1] These numbers translate to physician-to-population ratios of 170 per 100,000 people and 246 per 100,000 people, respectively.

The Graduate Medical Education National Advisory Committee to DHHS (GMENAC),[2] chartered in 1976 to make recommendations to the Secretary on present and future physician manpower needs, projected a national physician need for 1990 based on the expected occurrence of disease conditions in the 1990 population that are treated by various medical specialists. Included in this committee's model were the number of services or treatments needed for each condition, and the number of such services each specialist should reasonably be able to provide. Future population changes were considered, and current utilization patterns by specialty were applied without a projected change in the rate of demand. An extra number of physicians was added to cover necessary teaching, research, and administrative time. By adding the need projected separately for each specialty, a total U.S. physician requirement of

* The University of Alabama.
† Current Practice Characteristics and Distribution Patterns of Alabama Physicians.

466,000 by 1990 was derived. This is 191 physicians per 100,000 population.

Several projection studies,[1] using various models for physician need, are presented in Table 1. Earlier studies had made projections for 1975, the year which has been used as a baseline for the two most recent projections.

Averaging the projections shown in Table 1 for 1975 gives a ratio of 180/100,000. Averaging the two latest study figures gives a ratio just over 200/100,000. Thus, several different studies using various models would seem to indicate that the nation's requirement for physicians is approximately 180-200 per 100,000 persons.

There are, of course, problems with the projection of future requirement and supply. Hard data are inadequate. Estimates of future need or demand for physicians are all based on sophisticated models using current available data and previous experience, but there are many variables and assumptions involved, which may or may not prove correct. Who can predict for sure the make-up of the population 10 years from now? All previous Bureau of the Census estimates for 1980, for both Alabama and the U.S., are low when compared to the new census counts. These low estimates would make physician supply appear to be greater (per population) than it really is. Specific groups within the population are changing at different rates, which compounds the problem. The fastest growing component is the over-65 age group, among whom the need for medical care is greatest. This group can also afford to purchase needed care as long as Medicare and its supplements continue. Marked changes in the nation's economy (another severe recession), or a newly implemented payment mechanism (a ''cap'' on health insurance premiums), would certainly have an impact on ''effective economic demand'' for physician services, and the rate of utilization by the population.

The nature of medical practice, and the services needed or appropriate for a particular condition, may change with new scientific and technical developments, changing the need for certain types of physicians. Increased emphasis on prevention, patient education, and counseling may affect physician need. The amount of patient care provided varies with physician age, the site and type of practice, the use of ancillary personnel, and time spent in nonpatient care activities (teaching, research, administration, continuing education). Many of these non-care activities are currently mandated by various regulations — administrative and educational. Non patient care activities will likely grow significantly in the future with the increasing organization of the medical care industry and new career opportunities for physicians. This will add to the total number needed.

One cannot accept any projections for future physician need with total confidence; nevertheless, the several studies which have been done present similar results and are therefore used as an approximate guide for the analysis of Alabama's physician supply.

Alabama's Future Supply of Physicians

The number of physicians Alabama will actually have by 1990 can be projected with somewhat more accuracy than can the need. Using 1980 as the baseline year to be compatible with the projections, the total active physician supply (i.e., M.D.'s, D.O.'s, and limited license M.D.'s) is known: 4,604 physicians. The GMENAC study estimated that, by 1990, 30 percent of the nation's current supply will no longer be active.[2] In fact, the Alabama experience for the last decade has been about the same — a 27 percent loss of the state's 1970 physician base. Alabama had about 3,065 physicians (including D.O.'s) in 1970; 2,249 physicians who were licensed prior to 1970 were still practicing in the state in 1980.

Physicians are lost through death, retirement, and migration out of the state. Since there are no specific data with which to calculate these factors separately, 30 percent was used as an estimate of total physician loss by 1990 from the 1980 baseline supply. It should also be noted that 9 percent of the state's active physicians are age 65 and over, and that a number of recently licensed physicians are already listed as retired. Further, based on data on total licenses issued by the State Licensing Board for the Healing Arts, the state is currently retaining only about 50 percent of all *new* physician licensees over a ten-year period.

If the state's two medical schools continue a steady

TABLE 1
PREVIOUS AND CURRENT STUDIES OF U.S. PHYSICIAN MANPOWER NEED*

Study	*Projected Need*	*Year*	*Ratio/Population*
Fein (1967)	**340-385,000**	**1975**	**160-181/100,000**
National Advisory Commission on Health Manpower (1967)	**346,000 (minimum)**	**1975**	**162/100,000**
Bureau of Labor Statistics (1967)	**390,000**	**1975**	**183/100,000**
Public Health Service (1967)	**400-425,000**	**1975**	**188-200/100,000**
Bureau of Health Manpower (1978)	**415-600,000**	**1990**	**170-246/100,000**
GMENAC (1980)	**466,000**	**1990**	**191/100,000**

*** 1975 estimated population 213,032,000; from U.S. Census, Series P-25, No. 796, *Current Population Reports,* March 1979. 1990 projected population 243,513,000; from U.S. Census, Series P-25, No. 704, *Current Population Reports,* July 1977.**

TABLE 2
PROJECTED TOTAL PHYSICIAN SUPPLY FOR ALABAMA, 1990

Total Active Physician supply (Jan. 1, 1980)	4,604		
Less 30% attrition from baseline by 1990	−1,381		
Plus 2,239 projected Alabama medical school graduates 1980-89 × 55% retention over 10 years (full license MDs only — active & few inactive)	+1,231		
Plus 10 year number out-of-state graduates licensed 1970-79 who were retained in the state in 1980 (full license MDs only, active & inactive)	+1,589		
OR			
164% increase in out-of-state graduates (same as above in Alabama graduates)		+2,606	
OR			
Ration 2:1 for non-Alabama graduates to Alabama graduates as it was in 1980 (2,462:1,231)			+2,462
Projected physician supply, 1990, given different increases in non-Alabama graduates:	6,043	7,060	6,916
1990 physician:population ratios, assuming a 13% increase in population by 1990 (3893888 → 4400093)	137/100,000 1:728	160/100,000 1:623	157/100,000 1:636
1990 ratios assuming 10% increase population (3893888 → 4283277)	141/100,000 1:709	165/100,000 1:607	161/100,000 1:619

state in enrollment, enrollments already reduced in response to oversupply predictions, a maximum of 2,239 new physician graduates could be expected from 1980 through 1989.* Actually, the number should be a little less with medical school attrition and reduced enrollment. Alabama graduates practicing in the state in 1980 who were licensed during the previous ten-year period (1970-79) constituted 54 percent of the total number of those who actually graduated in the years 1969 through 1978 (allowing one year of post-graduate training prior to licensure).[3] Applying a 55 percent retention rate to the next decade's graduates, the state can expect to retain by 1990 about 1,231 of the new physicians it produces.

The factor which is most speculative in the projection of future supply is the migration into the state of physicians trained in other states and foreign countries. Alabama medical school graduates accounted for only 28 percent of the total number of physicians licensed during 1970-79 who were still in the state in 1980. An additional 1,589 physicians from out of state were added, and retained, during that period. Previous studies have applied a similar percentage (26%) as Alabama's contribution when calculating future physician supply for the state.[4] However, the number of Alabama medical graduates in the next 10 years will be about 164 percent the number that graduated during the previous 10 year period. The in-migration of physicians to Alabama may or may not keep pace with this increase. Also, since physician figures for the state, in recent years, show that about one-third of the total are Alabama medical school graduates and the other two-thirds are graduates of out-of-state schools, it might be assumed that this approximate ratio of 1:2 will continue to hold true. Our calculations for in-migration, therefore, have included the three possibilities of no change, or a percentage increase, or maintenance of this ratio.

An estimate must also be made of the state population in 1990. Alabama's population has increased by 12.9 percent since the 1970 census. Assuming another increase of 13 percent by 1990, the state's population would then be 4,400,093. If this estimate should prove too conservative, the projected physician supply will be even less adequate than shown. The increase may also be smaller; a 10% population increase was used in the projection in anticipation of this possibility.

Taking all the above factors into consideration, the projected possible physician supplies for Alabama in 1990 are presented in Table 2, with physician to population ratios given. The calculated ratios of total active physicians, not all of whom would be available for direct patient care to the public at large, fall within approximately one per every 600-700 persons. If current conditions continue, and the assumptions used in this projection prove to be well founded, the state will still be short of physicians in 1990.

If the state were to reach what has been described as the more nearly adequate level of one physician per 500 people, it would need at least 1,770 more generalists and 1,570 more specialists to serve the present population. These numbers will increase as the population continues to grow. By 1990, if the state population increases again by 13 percent, a total of 4,400 general

* (Sources: UASOM Office of Student Records, Office of Associate Dean, and Office of Admissions.)

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MEPROBAMATE: DRUG DEPENDENCE: Physicol and psychologicol dependence, ond obuse have occurred.

Chronic intoxicotion from prolonged ingestion of, usuolly, greoter thon recommended doses is monifested by otaxia, slurred speech, ond vertigo, Therefore, corefully supervise dose and omounts prescribed ond ovoid prolonged use, especiolly in olcoholics and others with known propensity for toking excessive quontities of drugs. Sudden withdrawol ofter prolonged ond excessive use may precipitote recurrence of preexisting symptoms, e.g anxiety, onorexio, or insomnio, or withdrawal reactions, e g., vomiting, otaxio, tremors, muscle twitching, confusionol stotes, hallucinosis, ond, rorely, convulsive seizures Such seizures ore more likely in persons with CNS domage or preexistent or latent convulsive disorders Onset of withdrowol symptoms occurs usuolly within 12 to 48 hours after discontinuotion; symptoms usuolly cease within next 12-to-48-hour period When excessive dosage has continued for weeks or months, reduce dosage gradually over 1 to 2 weeks rather thon stop abruptly Alternatively, a short-acting barbiturate may be substituted, then gradually withdrawn.

POTENTIALLY HAZARDOUS TASKS: Worn patients meprobomate may impair mental or physical abilities required for potentially hazardous tasks, e.g., driving or operating mochinery.

ADDITIVE EFFECTS: Since CNS-suppressant effects of meprobamate and alcohol or meprobamate and other psychotropic drugs may be additive, exercise caution with patients taking more thon one of these ogents simultoneously

USAGE IN PREGNANCY AND LACTATION: An increased risk of congenital maltormations associated with minor tranquilizers (meprobamate, chlordiazepoxide, and diazepam) during first trimester of pregnancy, has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. The possibility that a woman of childbearing potential may be pregnant at time of institution of therapy should be considered. Advise patients if they become pregnant during therapy or intend to become pregnant to communicate with their physicians about desirability of discontinuing the drug.

Meprobamate passes the placental barrier. It is present both in umbilical-cord blood at or near maternal plasma levels and in breast milk of lactating mothers at concentrations two to four times that of maternal plasma. When use of meprobamate is contemplated in breastfeeding patients, consider the drug's higher concentrations in breast milk as compared to maternal plasma levels.

USAGE IN CHILDREN Keep preparations with aspirin out of reach of children. Equogesic®-M is not recommended for patients 12 yeors of oge and under

PRECAUTIONS: ASPIRIN Solicylates ontagonize uricosuric activity of probenecid and sulfinpyrazone. Salicylates are reported to enhance hypoglycemic effect of sulfonylurea antidiabetics.

MEPROBAMATE. Use lowest effective dose, porticularly in elderly and or debilitated, to preclude over-sedation. Meprobamate is metabolized in the liver and excreted by the kidney; to avoid excess accumulation exercise coution in its use in patients with compromised liver or kidney function. Meprobamate occasionally may precipitate seizures in epileptic patients. It should be prescribed cautiously and in small quantities to patients with suicidal tendencies

ADVERSE REACTIONS: ASPIRIN: May couse epigastric discomfort, nauseo, and vomiting Hypersensitivity reactions, including urticaria, ongioneurotic edema, purpuro, osthma, and anaphyloxis may rarely occur. Potients receiving large doses of solicylotes moy develop tinnitus

MEPROBAMATE: CNS: Drowsiness, otaxio, dizziness, slurred speech, headoche, vertigo, weokness, poresthesias, impairment of visuol occommodotion, euphorio, overstimulotion, porodoxicol excitement, fast EEG activity

GI: Nouseo, vomiting, diarrheo.

CARDIOVASCULAR: Palpitation, tochycardia, vorious forms of arrhythmia, transient ECG chonges, syncope, hypotensive crisis.

ALLERGIC OR IDIOSYNCRATIC: Milder reactions ore characterized by itchy, urticoriol, or erythematous moculopapular rash, generalized or confined to the groin. Other reactions include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripherol edema, adenopothy, fever, fixed drug eruption with cross-reoction to carisoprodol, ond cross-sensitivity between meprobomate/mebutamote and meprobomote carbromol. Rore, more severe hypersensitivity reoctions include hyperpyrexio, chills, angioneurotic edema, bronchosposm, oliguria, and anurio. Also, anaphyloxis, exfoliative dermotitis, stomatitis, and proctitis Stevens-Johnson syndrome and bullous dermatitis have occurred.

HEMATOLOGIC (SEE ALSO "ALLERGIC OR IDIOSYNCRATIC"): Agranulocytosis, aplostic anemio hove been reported, although no causal relationship has been established, and thrombocytopenic purpura.

OTHER: Exacerbation of porphyric symptoms.

DOSAGE AND ADMINISTRATION: Usuol dose is one or two tablets, 3 to 4 times daily os needed for relief of pain when tension or onxiety is present. Not recommended for patients 12 years of age and under.

OVERDOSAGE: Treatment is essentially symptomatic and supportive. Any drug remoining in the stomoch should be removed Induction of vomiting or gostric lovoge moy be indicated. Activoted charcool moy reduce absorption of both aspirin ond meprobamate Aspirin overdosage produces usual symptoms ond signs of solicylote intoxication. Observotion and treatment should include monagement of hyperthermia, specific porenterol electrolyte therapy for ketoacidosis ond dehydrotion, wotching for evidence of hemorrhogic monifestotions due to hypoprothrombinemio which, if it occurs, usually requires whole-blood tronsfusions. Suicidol ottempts with meprobomote hove resulted in drowsiness, lethorgy, stupor, otoxio, como, shock, vasomotor and respirotory collopse. Some suicidal attempts have been fatal. The following data, reported in the literature and from other sources, ore not expected to correlote with each cose (considering foctors such os individuol susceptibility ond length of time from ingestion to treotment), but represent usuol ronges reported. Acute simple overdose (meprobomote otone): Deoth has been reported with ingestion of os little as 12 gram meprobamote and survival with as much os 40 grom.

BLOOD LEVELS:

0.5-2.0 mg percent represents usuol blood-level range after therapeutic doses. The level may occosionally be as high os 3.0 mg percent.

3-10 mg percent usuolly corresponds to findings of mild-to-moderate symptoms of overdosage, such as stupor or light coma.

10-20 mg percent usually corresponds to deeper coma, requiring more intensive treatment. Some fatalities occur.

At levels greater than 20 mg percent, more fatalities than survivals can be expected.

Acute combined overdose (meprobamate with other psychotropic drugs or alcohol): Since effects can be additive, history of ingestion of o low dose of meprobamate plus any of these compounds (or of a relotively low blood or tissue level) cannot be used as a prognostic indicator.

In coses of excessive doses, sleep ensues rapidly ond blood pressure, pulse, ond respirotory rates ore reduced to bosol levels Any drug remoining in stomoch should be removed ond symptomotic treotment given. Should respirotion or blood pressure become compromised, respirotory assistance, CNS stimulonts, and pressor agents should be administered cautiously as indicated. Diuresis, osmotic (mannitol) diuresis, peritoneol diolysis, ond hemodiolysis hove been used successfully in removing both aspirin and meprobomote. Alkalinizotion of the urine increoses excretion of solicylotes. Coreful monitoring of urinary output is necessory, ond caution should be taken to ovoid overhydrotion.

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physicians will be needed in this state to obtain a ratio of one per 1,000 persons, or a total of 8,800 physicians in all specialties.

Thus, although the physician supply should significantly improve in Alabama by 1990, it is not likely to approach the levels recommended by the GMENAC and other studies. Such improvement as occurs will probably be due largely to the migration into Alabama of physicians trained out of state, unless Alabama can find a way to greatly increase the retention of its medical school graduates. However, even these strategies may not solve the problems of geographic and specialty distribution.

Recent Trends

The projection of Alabama's future supply of physicians in 1990, and the resulting observation that improvement in numbers is not likely to approach the needs of the people based upon the GMENAC recommendations, can both be viewed in the context of recent trends in Alabama. Table 3 summarizes the changes in numbers that have occurred in several specialties for the period 1975-82. Data from 1975 were used for the baseline as they represented the first full year of accurate data describing Alabama physicians that were collected following the format of the National Center for Health Statistics.

The first column of the table presents the percentage increase in population that occurred over the seven year period in the counties constituting each category. Each subsequent column presents the change that occurred in numbers of physicians in each specialty in each group of counties, as well as the change in the ratio of physicians per 100,000 population that occurred. As can be seen in the table, the smallest counties in the state, those without any towns of 4,000 population or over, did not add to their supply of primary care physicians. The next two categories of counties have added to their supply during this period, although the gains made had not been sufficient to raise physician-population ratios near the nationally recommended levels (see Table 6 in the previous paper). The next two categories of counties experienced little change, relative to the increases in their populations (14.8% and 12%), while the most populous county in the state added physicians in these specialties substantially disproportionate to the increase in its population.

Progress is being made in Alabama in educating and attracting physicians to practice in the state. However, despite projections of a national oversupply of physicians by 1990 it is clear that such a phenomenon will not exist in this state by the next decade. Further, based on an assessment of the trends of the past seven years, at least in six specialties, it is also clear that the state's problems of geographic and specialty distributions will not be resolved merely as the result of the expected increase in numbers of physicians.

Conclusion

There are many problems inherent in projecting future requirements and supply of physicians. Hard data are inadequate. Estimates of future need or demand for physicians are all based on sophisticated models using current available data and previous experience, but there are many variables and assumptions involved, which may or may not prove correct.

The nature of medical practice, and the services needed or appropriate for a particular condition, may change with new scientific and technical developments, changing the need for certain types of physicians. Increased emphasis on prevention, patient education and counseling may affect physician need. The amount of patient care provided varies with physician age, the site and type of practice, the use of ancillary personnel, and time spent in nonpatient care activities (teaching, research, administration, continuing education). Many of these noncare activities are currently mandated by various regulations — administrative and educational. Nonpatient care activities will likely grow significantly in the future with the increasing organization of the medical care industry and new

TABLE 3
CHANGES IN SELECTED SPECIALTIES BY COUNTY SIZE, 1975-1982

		GP/FP		*IM*		*Peds*		*OB/GYN*		*G. Surgery*	
Counties	*Percent Increase in Pop.*	Δ	*Δ in MD/pop ratio*	Δ	*Δ in MD/pop ratio*	Δ	*Δ in MD/pop ratio*	Δ	*Δ in MD/pop ratio*	Δ	*Δ in MD/pop ratio*
25,000, no town over 4,000	**4.3%**	**2**	**—**	**—**	**−0.1**	**3**	**+1.6**	**−1**	**−0.4**	**4**	**+1.5**
25,000, at least one town over 4,000	**6.0**	**12**	**+4.9**	**4**	**+1.9**	**2**	**+1.0**	**—**	**—**	**5**	**+2.3**
25,000-50,000	**10.3**	**27**	**+1.5**	**17**	**+1.9**	**8**	**+0.9**	**11**	**+1.3**	**11**	**+1.0**
50,000-100,000	**14.8**	**19**	**−0.7**	**43**	**+3.6**	**23**	**+1.9**	**14**	**+0.9**	**18**	**+0.9**
100,000-500,000	**12.0**	**118**	**+8.3**	**113**	**+8.7**	**53**	**+3.9**	**43**	**+2.8**	**35**	**+1.7**
500,000	**4.2**	**23**	**+2.7**	**184**	**+26.4**	**86**	**+12.4**	**33**	**+4.5**	**32**	**+4.1**
Whole State	**10.1**	**201**	**+3.2**	**361**	**+8.3**	**175**	**+4.0**	**100**	**2.0**	**105**	**+1.9**

*** MD/population ratios are expressed in terms of physicians per 100,000 population.**

career opportunities for physicians. This will add to the total number needed.

Based upon the GMENAC and other studies the best estimate available places the requirements roughly between 180 and 200 physicians per 100,000 population. The GMENAC estimates a physician surplus of 70,000 by 1990 and this, plus severe fiscal stringencies, has affected public policy at federal and state levels.

The uncritical acceptance of this conclusion, that there will be a physician surplus, without a careful study of all the factors that relate to physician need in each state and region, can lead to unfortunate results. Even in the face of a numerical surplus of physicians nationally there will be some states and many rural and inner city areas that experience serious shortages of physicians. Along with primary care physicians, many specialists will be in short supply, especially those most needed to help solve some of the more serious health problems. The data from this study indicate Alabama will share in these shortages. The data also indicate that, before major policy decisions are made at the state level that affect medical education and medical practice, much more information is needed that accurately describes numbers and distributions of physicians and the characteristics of their practices. Alabama greatly needs the capacity of sophisticated, ongoing manpower studies. Adequate data from such studies can support the sound judgement that must be used in order to address the state's health manpower problems appropriately.

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ADDENDUM

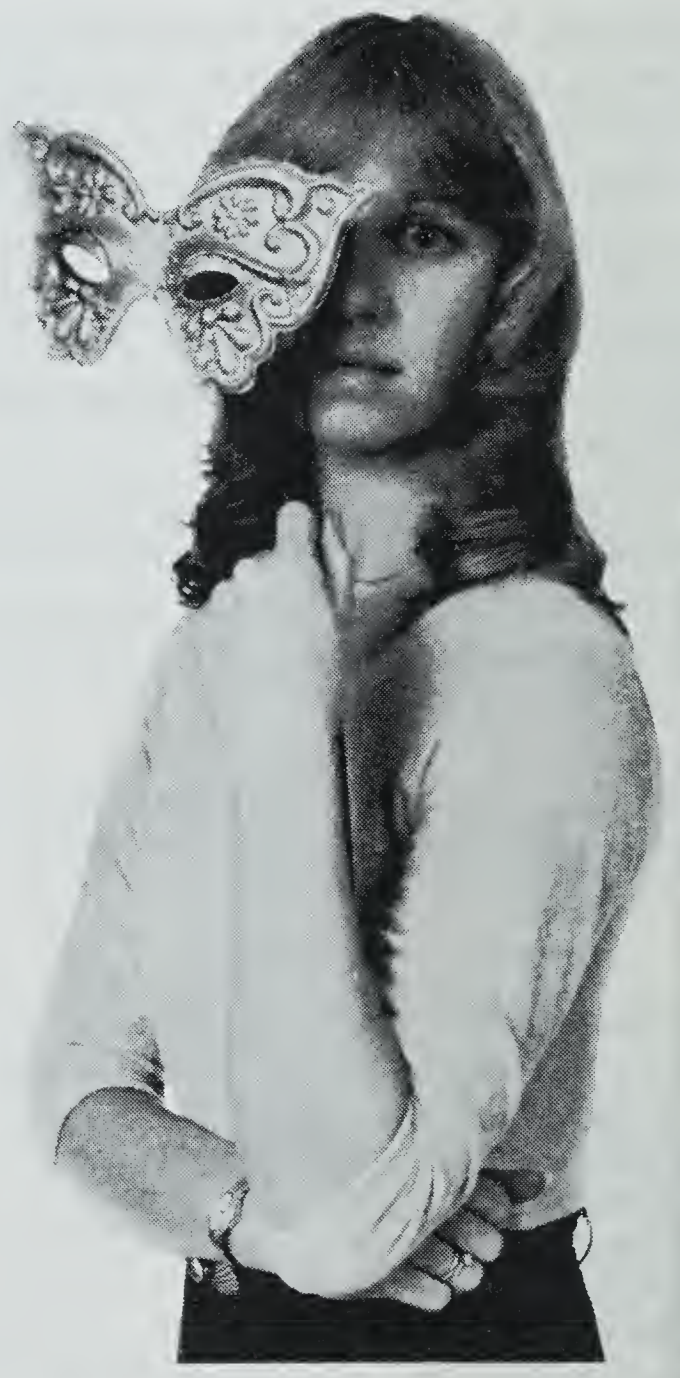
Increased Trends of Prostate Operations in Alabama

Cecil Morgan, Jr., M.D.
Sheila Spruell, ART

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Doctors and Patients in the New Competitive Market

Herbert U. Pegues II, M.D.*

New Wave Economics

Medicine seems no longer infinitely expandable nor immune to either the politics of scarcity or affluence. Irrespective of competition or regulation, it is difficult to perceive that exemplary medical care will not be defined and carried out in light of efficiency, productivity, quality, and reasonable cost. Patients will want it, and the competitive physician will supply it.

Our ''puritan virtues'' have already made us competitors at a ''micro'' level of the market society. Paradoxically, market behavior has been the underpinning of physicians' communication to patients, peers, and third party payers about the ways of practice. Our behaviors have marketed our reputations. Society's demands have been met with specialization and more emphasis on the longitudinal elements of care. While technology reigns supreme the ''virtuous'' have given long hours, compassion, and dependability. In essence, we have been competing since grammar school to become ''virtuous'' and, in general, physicians are held in high esteem[1] and people tend to be satisfied with the care of physicians who provide time and convenience, who counsel about the costs of care, and who show personal interest.[2-4]

At the ''macro'' level of market society, our virtuosity has been viewed as excessive and costly to produce, to purchase and to maintain. Business says that health care costs now total 10% of wages and are rising faster than inflation. Hospital costs have outstripped all others in the provider setting. Health care expenditures are projected to 11.5% of the gross national product by 1990. Some health economists have indicted providers with ''target income seeking'' in the aftermath of health care regulations and controls.[7] The cost of doing the business of health care is seemingly passed to whomever foots the health care bill anywhere in the marketplace.

It follows that the mandates for change in the delivery of medical care have origins in the complexity of cost containment, and to a lesser extent, access to medical care. Both buyers and sellers will now turn to mediators or arbiters, and authorities to control the economics and the sociology of health care delivery.

There is little reason to doubt why the federal government and all insurers — who collectively purchase

* Adapted from a Presentation to the Annual Scientific Session, October 5, 1982, San Francisco, California. Dr. Pegues, formerly Assistant Professor of Family Practice, UAB School of Medicine, is currently Chairman of the Department of Community Medicine and Family Practice at the Morehouse School of Medicine, 720 Westview Drive, SW, Atlanta, Georgia 30310.

nearly two-thirds of all health care services — now catalyze the movement of increasing provider competition in addition to control by regulation. It is supposed to follow that competition would protect the consumer by driving down prices; that the consumer is necessary in determining the services produced and will "spend in fashion that gives price signals to society's producers."[5] Thus, the consumer is sovereign and health care providers must respond.

The consumers (payers) are shopping. Many employers are taking bids for health contracts and offering cafeteria style health plans for employee benefit packages. Some companies are finding that a "PSRO" model can be used to regulate their health care expenses. Hospitals are increasingly adopting corporate management models that have proven to contain cost (and increase profit). Look who owns the hospitals.

The government seems to be favoring a regulatory approach to cost containment that is intrinsically competitive. It has also stimulated Wall Street to invest in health maintenance organizations. Whatever regulatory methods advanced — "Diagnosis Related Reimbursement," prospective reimbursement, vouchers, or health spending taxation, most health care institutions and providers will compete to receive payments. Providers will efficiently "package" their services in order to attract buyers — in particular, the big spenders, including government and third party carriers. The new supply and the newer caretakers (including the old caretakers) will undoubtedly vie for patients' attention.

Free standing emergency rooms and surgical centers now compete for the hospital patient. Hospitals have clearly entered into the ambulatory care market. Medical group practice is evolving as the major practice type in the United States. "Preferred Provider Organizations" (PPO) are emerging. Some major private health insurers are full-time into health maintenance (HMO) business. Business, industry, and provider organizations, in association with insurers have formed new coalitions. They have met to solve health care costs. It is conceivable that the work of coalitions may spawn itself as a newcomer to the competitive market. Contrary to good intentions of refining utilization review, emphasizing prevention and promoting access to care, the potential for a new kind of medical oligopoly seems certain.

Behavioral Change

Access to physicians and traditional modes of medical practice have steadily increased over the last decade as functions of increasing physician supply, redeployment, and distribution to both rural and urban areas.[6] Simply increasing physician supply may not give patients what they want. However, the estimated surplus of physicians by 1990, among other things, will influence changes in practice methods, habits, and expectations.

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Bactrim™ DS
(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:
Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.
For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.
For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.
For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.
Also for the treatment of documented *Pneumocystis carinii* pneumonitis.
Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.
Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, hepatocellular necrosis, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.
Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients. *Pregnancy:* Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.
Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, hepatocellular necrosis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.
Dosage: *Not recommended for infants less than two months of age.*
URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:
Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.
Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.
For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.
ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:
Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.
PNEUMOCYSTIS CARINII PNEUMONITIS:
Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.
Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension,* containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension,* containing 40 mg trimethoprim and 200 mg sulfamethoxazole per tea spoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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In vitro studies demonstrate

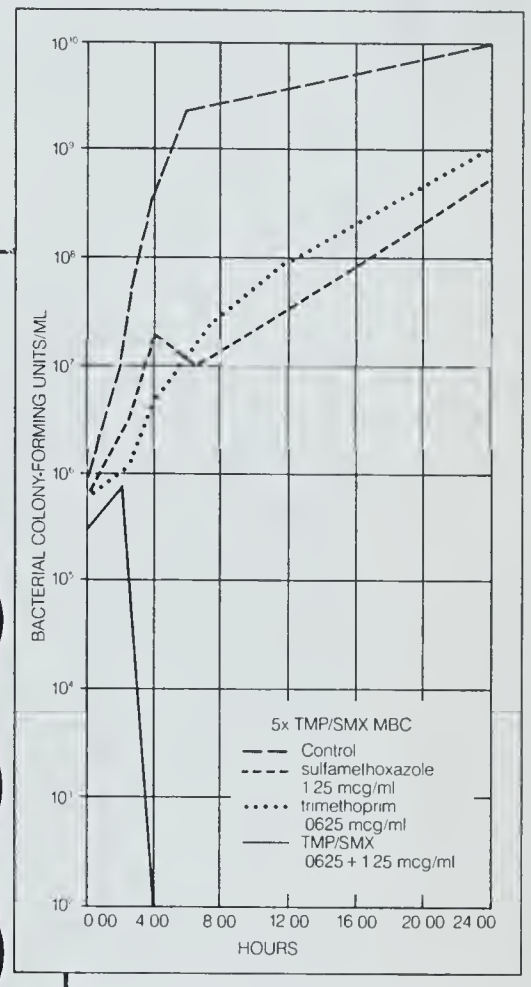
Bactericidal activity with minimal resistance

Percent of isolates of common uropathogens sensitive to BACTRIM and to other antimicrobials

	Escherichia coli	*Klebsiella pneumoniae*	*Proteus mirabilis*	*Proteus vulgaris*	*Proteus* sp.	*Enterobacter* sp.	*Enterobacter aerogenes*	*Enterobacter cloacae*
BACTRIM	96% 328,598	89% 63,551	93% 62,691	84% 4174	91% 4381	88% 1736	96% 7326	92% 11,856
ampicillin	72% 345,209	5% 65,466	85% 67,338	16% 4381	70% 4402	10% 1775	9% 7759	11% 12,091
cephalexin†	81% 343,339	85% 67,031	92% 67,027	16% 4398	80% 4365	22% 1834	13% 7571	12% 11,846
nitrofur-antoin	97% 307,785	65% 61,162	7% 59,775	13% 3848	14% 3059	67% 1707	60% 7109	67% 10,830

†Analogous to cephalothin, the primary antibiotic disc used in testing.
Source: The Bacteriologic Report, BAC-DATA Medical Information Systems, Inc., Winter Series, 1981-82.
Numbers under percentages refer to the projected number of isolates tested.

RAPID *IN VITRO* DESTRUCTION OF *E. COLI* *



Kill curve kinetics of Bactrim and its individual components against *E. coli in vitro.*[1]

The bactericidal action of Bactrim has been demonstrated *in vitro* on laboratory strains of *E. coli*[1,2] and on clinical isolates of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis* and *Morganella morganii*[3]—the most common causative organisms of urinary tract infections.[4] More than 100 published studies attest to the efficacy of Bactrim in recurrent urinary tract infections due to these organisms.[5] In comparative studies with other antimicrobials, Bactrim has consistently demonstrated unsurpassed efficacy during therapy.[6-11]

Resistance to Bactrim develops more slowly than to either of its components alone *in vitro.** Among urinary tract isolates, resistance has rarely emerged in susceptible strains.[5,12] Bactrim is contraindicated in pregnancy at term, during lactation, in infants less than two months old and in documented megaloblastic anemia due to folate deficiency.

Initial episodes of uncomplicated urinary infections should be treated with a single-agent antimicrobial.

Bactrim™ DS

(trimethoprim and sulfamethoxazole/Roche)

b.i.d. *for recurrent urinary tract infections*

**In vitro* data do not necessarily predict clinical results.

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See next page for references and a summary of product information.

Motrin®
ibuprofen, Upjohn
600 mg Tablets



More convenient for your patients

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J-9043-4 July 1981

Recent ''market place'' research reminds us that people are generally satisfied with their medical care — but get dissatisfied with waiting room times of 30 minutes or more, time spent with their physician of less than 15 minutes, and appointment waiting times of more than 2 weeks.[2, 4] One study reasserts that the dimensions of patient-physician interaction override cost concerns as the greatest overall determinant of satisfaction with medical care.[4] It can be derived that the patient clearly is a formulator of the pattern of economic activity in the health care marketplace as well as a validator of the efficacy, quality, and outcomes of care.[8]

The market research is telling us what our patients want: humaneness, quality, convenience, and reasonable cost. It also provides feedback and suggests how physicians ought to behave and organize themselves in order to maintain patients' satisfaction and confidence. Having taken these elements into consideration of care, we must now review those relationships against a background of an increasing physician supply, a slower growth in population, rising practice cost due to inflation or necessity, and the realities of competition and regulation. While the consumer becomes better informed of health care services, the future will bring quite a choice of accessible services. The patient will likely want to be continually ''desensitized'' to the true cost of their care and would welcome a reimbursement structure minimizing out of pocket cost.[9, 10]

The flexible physician will assess the need to adopt practice habits and stabilizing practice techniques that give patients what they want while optimizing practice growth. Physicians and groups of physicians will become more market conscious. While many physicians will be free to choose their practice strategy and habits, most will want to learn how to trim practice overhead while delivering quality care. Some may elect to align themselves closer with hospitals, satellite practices, health maintenance organizations, or ''preferred providers'' to benefit from efficient cost sharing or saving arrangements and patient referrals. Providers will want and protect their market share. Those who market will be assisted in the planning and maintenance of patient care services. Those physicians who elect not to become ''corporate employees'' may behave to recapture services relegated to hospitals and their ambulatory satellite clinic operations. Others will rekindle the old fashioned, puritan virtues of availability, after hours care, weekend office calls and hours, house calls, and seeing emergency room patients. Many will want to be better known in the community by active participation in community health education programs, and publishing creative patient information brochures, or advertising. One recent study revealed a high level of consumer receptivity to physician advertising.[12] On the other hand, consumers expressed concern about the medium of advertising — revealing that traditional forms of media available to business such as television or radio, may not be ''appropriate'' for physicians. Without doubt, the generic issue of marketing by physicians is reality. The asthetics of advertising will be the subject of debate, consensus, and control.

Summary

The newer caretaking arrangements for patients are on the rise. Undoubtedly, we will learn more and more about them as they ''market themselves.'' The maintenance of a satisfying doctor-patient relationship that is accessible and available at reasonable cost is old fashioned but desirable. Surely, the competitive physician knows this. What constitutes a good doctor is now undergoing new exploration. But doctors are going to need some additional sets of skills which heretofore may have been objectionable. We are all aware of intense public relations and public service activities by our hospitals, allied health care institutions, and some physicians. We have seen how marketing can take the form of advertising, however fierce. It seems clear that physicians of all persuasions will be affected significantly by the newer concepts of marketing on a scale that exceeds our past experiences. How important is it for clinicians to assess patient satisfaction and attitudes toward their care? What are the management methods most adaptable for practitioners to learn that they are delivering quality, convenient and compassionate care at reasonable cost? How can physicians and groups of physicians compete with each other without losing many of our traditional values and practice habits? Can physicians adapt without dismantling a system which has generally been virtuous or satisfying? The response that would be inappropriate is cynicism, panic, and withdrawal. We have somehow got to find the energy and the will to preserve our virtues from becoming vices.

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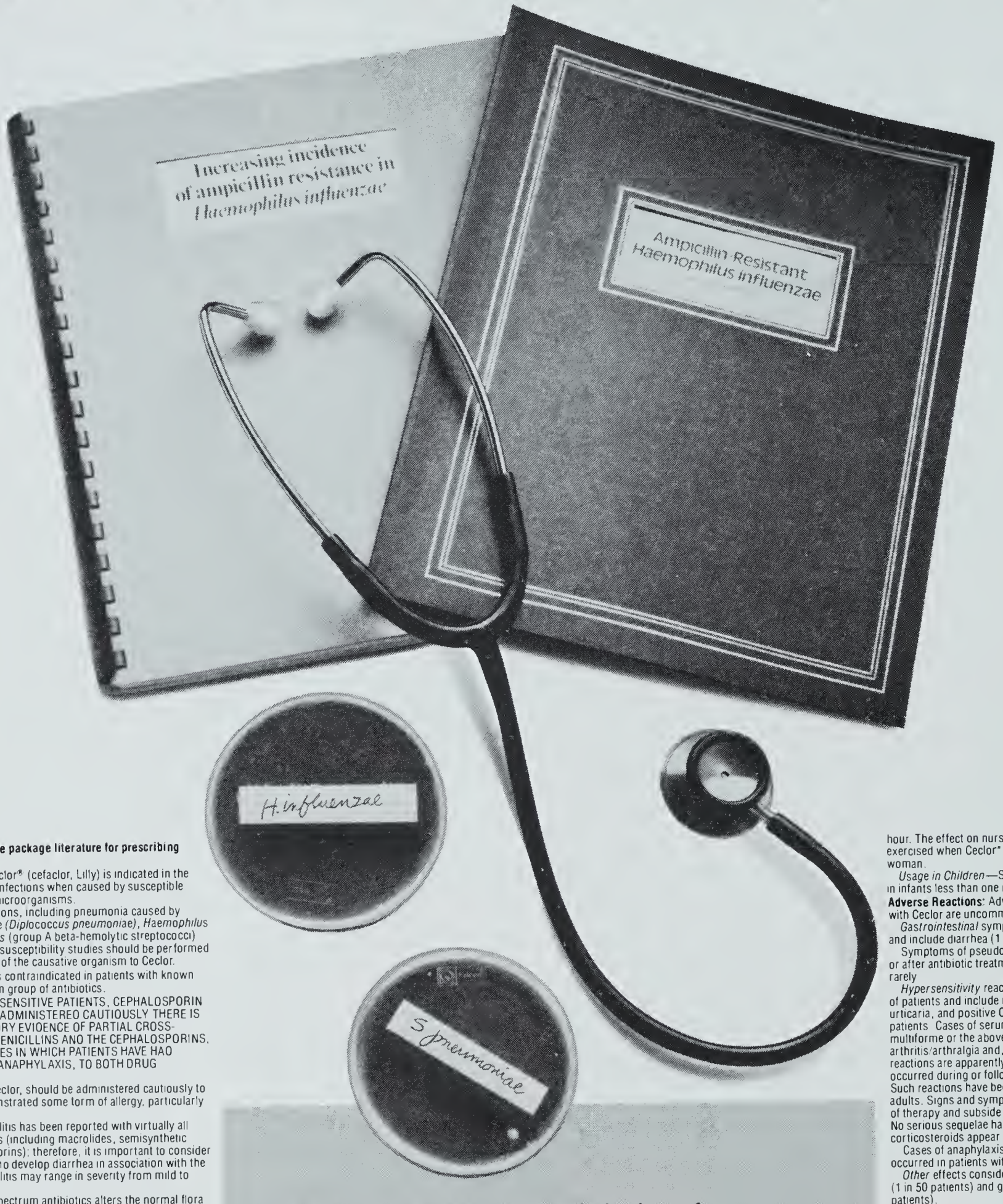
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An added complication... in the treatment of bacterial bronchitis*



Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor

Pulvules®, 250 and 500 mg

Brief Summary. Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms.

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions*—If an allergic reaction to Ceclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g , pressor amines, antihistamines, or corticosteroids

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed

Nursing Mothers—Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor* (cefaclor, Lilly) is administered to a nursing woman.

Usage in Children—Safety and effectiveness of this product for use in infants less than one month of age have not been established

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below:

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations of SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H. influenzae*.*

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever See prescribing information.

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300035

Behavioral Treatment of Obesity

Karl Kirkland, Ph.D.*
Charles T. Moss, Jr., M.D.

In 1958 Stunkard summarized treatment of obesity as a dismal state of affairs with spectacularly unsuccessful results, e.g., "Most obese persons will not stay in treatment. Of those who stay in treatment, most will not lose weight and, of those who do lose weight, most will regain it (p. 27)."[1] Many researchers have suggested that treatment of obesity by drugs and fad diets fails because the patient lapses back into former maladaptive eating habits. A classical study by Stuart in 1967 began an extensive series of research efforts demonstrating that behavior modification and learning principles applied to the treatment of obesity yielded impressive results.[2-7] The purpose of this paper is to review the results of experimental studies of the behavioral treatment of obesity as they have become formulated into practical principles that can be assimilated into primary care medicine.

Obesity is generally recognized as a major health hazard with both physical and psychological components. However, Musante cites a study of medical management of obesity in an outpatient clinic which showed that "even when patients were remarkedly overweight, a weight management program was proposed by a physician for only 50 percent of these patients. Regardless of the severity of the obesity, if weight problems were not the patient's primary reason for the visit, the doctor in most instances tacitly entered into an agreement not to raise the issue."[8] The behavioral approach of acquiring new eating behaviors is proposed as the most viable treatment approach because unlike the temporary content changes of "dieting," new eating behaviors are acquired and persons change "how" as well as "what" they eat. The most successful programs combine behavioral self-management training, exercise, and food management training.[3]

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All behavioral programs share a common assumption that obesity can be controlled by decreasing food intake and/or increasing exercise. Stunkard and Mahoney describe components generally found in behavioral treatments of obesity. These include: self-monitoring of body weight and food intake; (2) reasonable goal setting; (3) counseling on nutrition and/or exercise; (4) tangible consequences; (5) social and familial reinforcement; (6) cognitive restructuring; (7) self-prescribed consequences; and (8) stimulus control procedures. Measures of success have included pounds lost, percent of body weight lost, percent of patients reaching a self-determined goal weight, and percent losing 20 pounds or more, or 40 pounds or more.

Studies have consistently reported low drop-out rates, lack of negative side-effects, and low-risk as additional desirable effects of behavioral treatment approaches to obesity. Live-in day residence and inpatient programs that phase into outpatient programs have generally been reported as being more successful than outpatient visits alone. However, studies of outpatient therapy alone suggest that 25% of patients lose as much as 20 pounds and 5% lose as much as 40 pounds.[3] Either alternative is better than results of fad diets and pharmacotherapy of obesity,[9] reports of which suggest a quicker return to former eating habits.

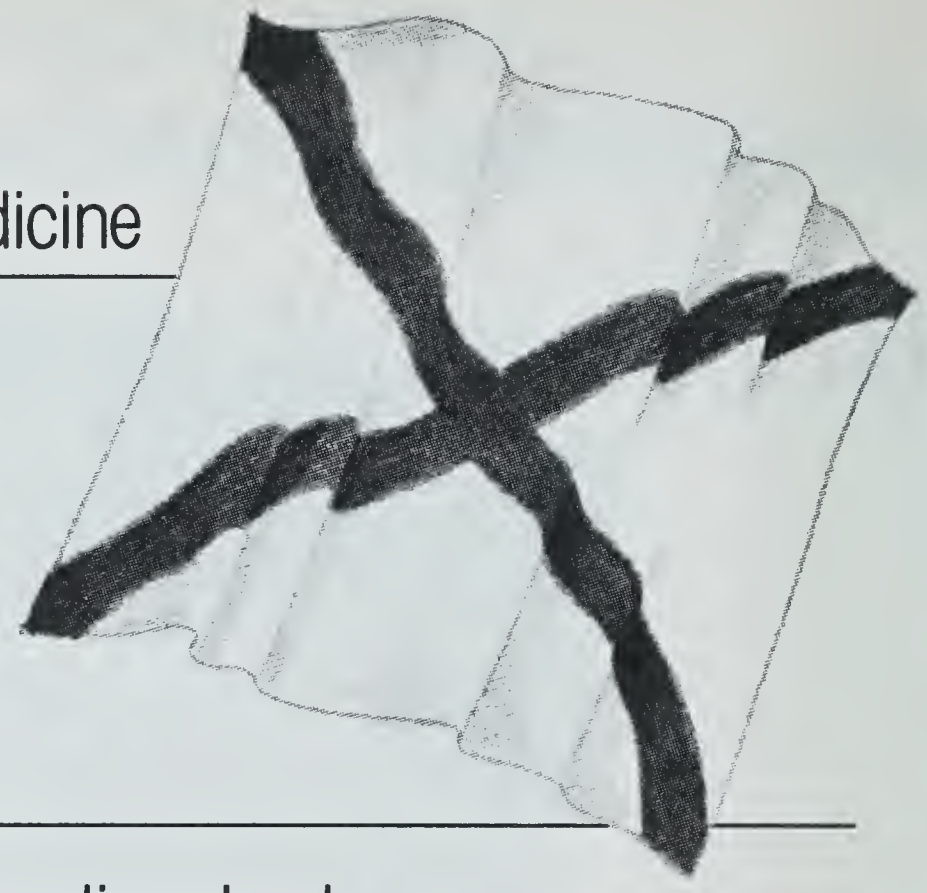
The behavioral self-control approach to weight control, with its realistic emphasis on small increments in weight loss (1-2 pounds/week), the intake of a variety of nutritious and palatable foods, and control procedures that make engaging in inappropriate eating behaviors difficult, is a rather painless approach to weight loss. Food exchange procedures that allow for a wide range of flexibility in the diet are recommended.

The following self-control techniques have emerged from the literature as the most useful behavioral strategies for weight loss.

1. Remove undesirable foods from the house. Change

Roche salutes the history of Alabama medicine

THE SURGEON WHO MADE USE OF A SPOON



Dr. James Marion Sims

Dr. Sims had already established a distinguished reputation for surgical originality when he began concentrated study on, and development of, specialized treatment for vesicovaginal fistula.

In 1845, while examining a woman for a retroversion of the uterus, he placed her in the knee-elbow position, subsequently called "Sims' position." By chance he discovered that placing two fingers in the vagina allowed external air pressure to push the vagina into its normal position. Later he used the bent handle of a spoon, and from this simple tool he developed the Sims speculum, which made possible successful viewing and surgical treatment of vesicovaginal fistulas.[1]

Basis for specialty of gynecology

Sims also developed a special suture of silver wire and a catheter for emptying the bladder during recovery.

The Sims position and Sims' three surgical implements became the four components basic to gynecology. His published results describing their combination in practice created a profound impression within medical circles.[1,2]

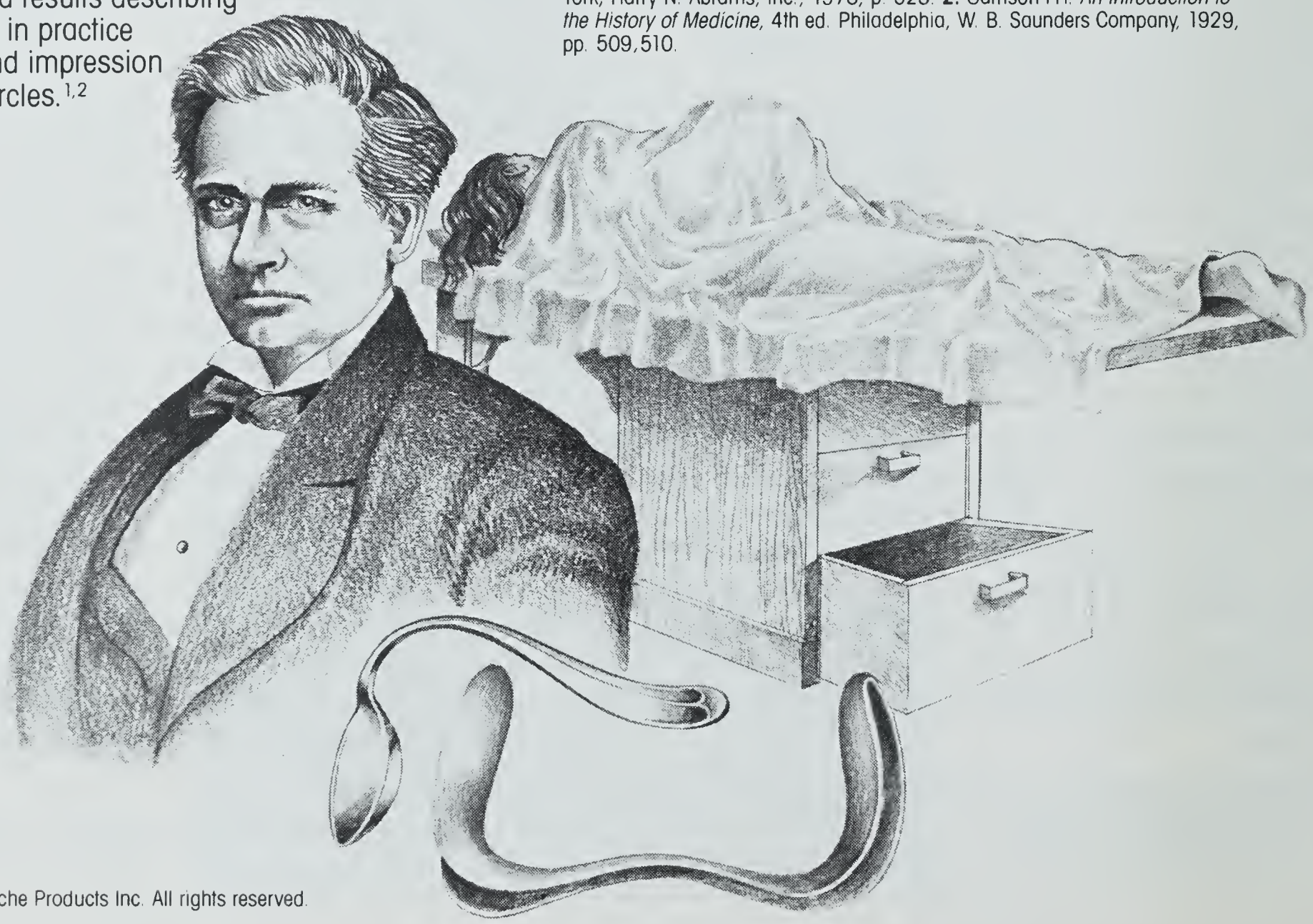
International esteem

In 1861, Sims was invited to perform his now-famed fistula operation before the surgical elite of Europe. His writings were translated into German, and he was hailed as a peer by noted French physicians.

Success seemed to stimulate Dr. Sims. Prior to his death in 1883, he gained credit for other major surgical advances—a method for amputating the cervix uteri, a significant description of the condition he called "vaginismus," his procedure for cholecystotomy and his important medical paper on aseptic intraperitoneal invasion.[2]

Dr. Sims worked in Europe and in New York City after 1853—and his statue stands today in New York's Bryant Park.[2] But he accomplished his most significant work—and is esteemed in medical history—as the gifted surgeon from Alabama.

References: 1. Lyons AS, Petrucelli RJ II: *Medicine: An Illustrated History.* New York, Harry N. Abrams, Inc., 1978, p. 523. **2.** Garrison FH: *An Introduction to the History of Medicine,* 4th ed. Philadelphia, W. B. Saunders Company, 1929, pp. 509,510.



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Limbitrol also has a rapid onset of action which may lead to greater patient compliance. In a multicenter study, patients taking Limbitrol experienced 62% of their overall improvement within the first week of therapy.[2]

In another multicenter study,[3] the following symptoms associated with anxious depression were significantly reduced during the first two weeks of therapy:

- ☐ Headache—79%
- ☐ Early insomnia—91%
 Middle insomnia—87%
 Late insomnia—89%
- ☐ Gastrointestinal upset—73%

In two multicenter studies, only 1.9% of Limbitrol patients experienced cardiovascular side effects.[3]

Patients should be cautioned about the combined effects with alcohol or other CNS depressants and about activities requiring complete mental alertness such as operating machinery or driving a car.

References: 1. Rickels K: Drug treatment of anxiety, in *Psychopharmacology in the Practice of Medicine,* edited by Jarvik ME; New York, Appleton-Century-Crofts, 1977, p. 316. **2.** Feighner JP *et al: Psychopharmacology 61:*217-229, Mar 1979. **3.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

In moderate depression and anxiety

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Tablets 5-12.5 each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)
Tablets 10-25 each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt)

Please see summary of product information on following page.

LIMBITROL® TABLETS Ⓝ Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).
***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated: sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude toxic, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and blotting. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.
Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.
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grocery buying habits and increase time and effort required to prepare foods.
2. Modify eating behavior. Return utensil to table between mouthfuls. Take 3-5 minute breaks during meals. Chew each mouthful 10 times.
3. Record eating behavior. Use a food diary and weight loss charts.
4. Narrow the stimuli. In order to decrease the number of stimuli eliciting eating behavior, the patient is instructed to eat in only one place. Restrict eating to one specific chair and one small salad plate. No food is allowed in any other room in the house. The patient is to engage in no other activity such as watching TV, listening to the radio, or reading while eating. The patient should be informed that obese people are especially susceptible to environmentally cued as opposed to viscerally cued eating.
5. Change the stimulus environment and utilize environmental cues. The patient should take advantage of his particular learning history by exposing himself to stimuli that tend to inhibit eating. For example, if he is too embarrassed to gorge himself when others are around, he should attempt to eat only in the presence of others. Use of cues such as signs, charts, or photos of former self is also recommended to suppress eating behavior.
6. Increase energy expenditure by exercise. This suppresses appetite, increases basal metabolism, minimizes loss of lean tissue, and improves/elevates mood. Exercise in obese persons can also have a positive influence on plasma insulin levels, plasma lipid levels, blood pressure, and coronary efficiency, even in the absence of weight loss.
7. Be careful not to overburden the patient and watch for untoward responses such as depressive reactions.

The above practical guidelines are proposed as easily implemented, reasonable, and effective in the medical management of obesity. Behavioral approaches to obesity offer the physician and patient clear cut, proven strategies for the management of obesity, offering both a plan to decrease avoidance of the problem.

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The King's English

Bivian Trussell Wright

Now that travel between London and Atlanta is readily available, many Alabamians have discovered a vacation in the United Kingdom is almost as easy as a trip to the West Coast.

We have spent the last several years driving in the United Kingdom. In addition to the beauty of the countryside, the grandeur of the historic cathedrals, and the splendor of the stately homes and castles, we have had some amusing experiences with regards to language.

Despite the fact that some of the words, subjects, verbs, nouns and other little items have similarities, English speech often seems very different from American speech. British slang expressions are sometimes very odd to us. Stateside newcomers can innocently cause some embarrassment or merriment also.

We were astonished when during Prince Andrew's recent rendezvous with the American actress on the Island of Mustique made headlines in American newspapers, the local headline read ''Randy Andy.'' We wondered if the American public realized that to the British that word is snynonymous with the American slang expression ''horny.'' Both countries have taboos. Use ''tramp'' instead of ''bum'' because in the U.K. ''bum'' is what you place on the chair seat when you sit.

If you use the word ''khaki'' in reference to your slacks or skirt in some counties, your British friend would have cause for alarm as ''Khaki'' is a local slang for ''horse manure.'' And you should always say ''trousers,'' never ''pants,'' as pants are what you should be wearing under the trousers. We often stay in private homes called B & B, or bed and breakfast. If your English host bids you Good Night and then adds in a casual tone, ''I'll pop up to your room and knock you up around seven-thirty tomorrow morning,'' he only means he will chastely knock on your door to awaken you. When a shopkeeper calls you ''love,'' it is not intended as a term of endearment, but rather is his general word for a stranger.

Dozens of proper nouns are pronounced by contraction. This can really be confusing in asking directions. For example, Leicester is ''Lester,'' Berkeley is ''Barkley,'' Grosvenor is ''Grovener,'' Gloucester is ''Gloster,'' Cockney is a rhyming slang that all of us learned a little about while watching Rex Harrison teach Audrey Hepburn to speak in the movie, ''My Fair Lady.''

Bill and I discussing a painting in a rural Devon gallery wondered aloud why the artist did something or other, and referred to the artist as ''her.'' The elderly

gentleman tending the gallery heard us and said, ''t'wernt aér, t'was uh A'' which translates to ''it was not a her, but a he.'' In cockney ''pig's ear'' is a beer, ''trouble and strife'' is a wife.

To avoid being an ungracious visitor, never say ''you English'' when speaking with a Welshman or a Scot. Form the habit on arrival of thinking of all the natives as British and you won't make a mistake that is one of their pet peeves.

> *''In traveling, a man must carry knowledge with him if he would bring home knowledge.''* — Samuel Johnson, 17 April 1778

Here is a short vocabulary which might prove helpful, with the British term first and the American second: gangway, aisle; flat, apartment; forecourt, front yard; closet, water closet, W.C., loo, bathroom; pram, baby carriage;

Estate agent, real estate agent; shandy, lemonade and beer; lager, light colored beer; whisky (without the E), scotch (in England 70 proof); sweets, candy;

Sweet, dessert; biscuit, cracker; scone, biscuit; wardrobe, closet; nappy, diaper;

Serviette, napkin; single ticket, one way; return, round trip; public school, private school; private school, public school;

First floor, second floor; milk bar, soda fountain; queue up, stand in line; waist coat, vest; dear, or pricey, expensive; telephone box or kiosk, telephone booth; chips, french fries;

Christian name, first name; petrol, gasoline; ice, ice cream; geyser, water heater; stalls, orchestra seats;

Underground or tube, subway; coach, bus; lorry, truck; booking hall, ticket office; fortnight, 15 days;

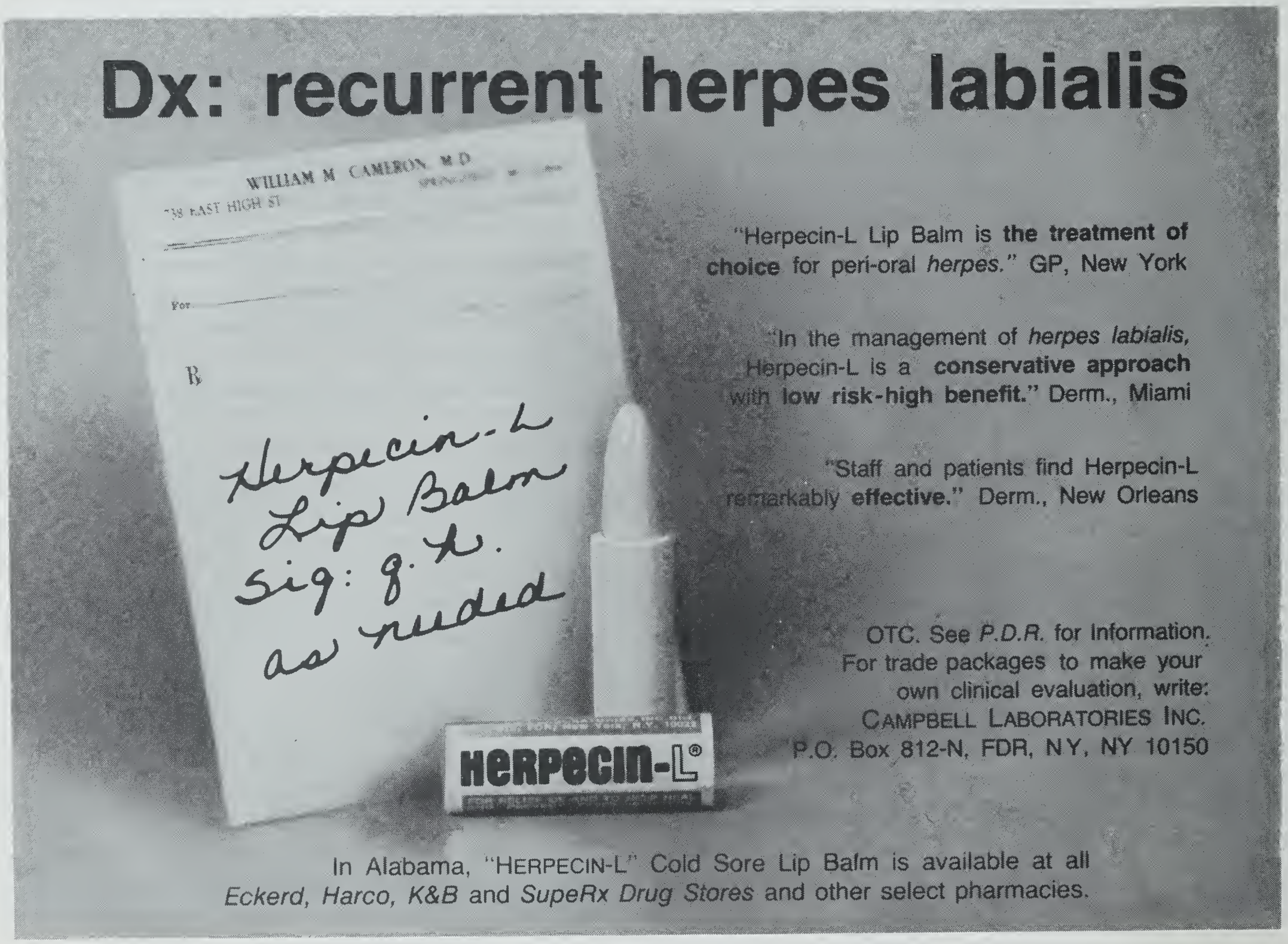
Holiday, vacation; telly, television; flannel or face cloth, wash cloth; flex, extension cord;

Lift, elevator; braces, suspenders; dual carriageway, four-lane road; single-tract road, very narrow road; roundabout, traffic circle;

Give way, yield; overtaking, passing; dustman, garbage man; refuse tip, garbage dump; boot (car), trunk;

Bonnet, hood; windscreen, windshield; spanner, monkey wrench; caravan night halt, camper overnight parking; free house (pub), many brands of beer; vest, undershirt;

EMOPT, evening meal optional; to push off, to leave; to chase up, to find; to fetch, to bring; keep your pecker up, keep up your courage. ⊡



Management of the Red Eye

Robert L. Phillips, M.D., F.A.C.S.*

Introduction

Initial management of the red eye need not be complicated but it does require caution and attention to a few details. However, mismanagement of the red eye is amazingly simple and requires no previous training or attention to any details. The inappropriate use of topical steroids is the most common and often disastrous example that can usually be avoided by following a simple methodology. Every red eye does not require antibiotics, but it is often difficult to make the choice between treatment and serial observation.

In the next few paragraphs I will try to outline the differential diagnosis of the red eye and some solutions aimed at keeping us all out of trouble. Almost all specialties have occasion to treat the red eye or at least participate in its initial management. The initial decisions are important as well as the time for appropriate referral, and both will be discussed.

Bacterial and Viral Conjunctivitis[1]

Infectious types of conjunctivitis are almost always initially unilateral. The onset is insidious with slow development of redness, foreign-body sensation, and a discharge that may vary from ropy mucous strands to a copious exudate or just simple tearing. There may be swelling of the lids, and most patients will complain of the lids sticking together. Especially on awakening, during sleep the normal flushing action of the tears is absent, allowing toxins to accumulate while the lids are closed.

The second eye may be completely spared or may develop inflammation up to 10 to 14 days later. There is no certain way to separate viral from bacterial conjunctivitis, but the secretions are usually more copious and purulent in bacterial conjunctivitis. However, this is not a rule. Viral disease may be equally as severe as bacterial and the cornea may be involved in either or both.

An accompanying or preceding cough or cold might suggest a viral etiology and if you palpate a tender preauricular node, you may have made a diagnosis of adenoviral conjunctivitis possibly of the epidemic type. Corneal involvement sets apart epidemic keratoconjunctivitis (EKC) from other adenoviruses.[2] An important point is that conjunctivitis usually causes little if any decrease in vision. A decrease in visual acuity should alert you to the need for referral. Any conjunctivitis that involves the cornea should also be referred, whether accompanied by visual loss or not. (Table 1)

* Children's Hospital Tower, Suite 555, 1600 7th Avenue South, Birmingham, AL 35233.

Allergic Conjunctivitis

Allergic conjunctivitis is nearly always bilateral even though symptoms may be assymmetric. The onset can be rapid and might occur while mowing the yard or working in the garden. Rapid and bullous edema of the conjunctiva can occur along with tearing, itching, lid swelling and injection. The conjunctiva is very elastic and may swell to frightening proportions in the mind of a patient.

TABLE 1

CLASSIFICATION OF CONJUNCTIVITIS

Bacterial
Viral
Chlamydial
Herpetic
Vernal
Phylectenular
Toxic
Allergic
Follicular
Papillary

A number of antigens may be involved, and the onset of allergic symptoms may present more slowly and may be seasonal. Vernal conjunctivitis occurs worldwide during the warm months and is characterized by a cobblestone appearance of the tarsal conjunctiva beneath the upper lid.[3-4] Over 90% of patients with vernal conjunctivitis have their onset at age 15 or under and most are male. Atopic diseases are common among these patients. I have not found skin testing to be of significant benefit when symptoms are only ocular in location.

Cultures

Any bacteria can produce mild symptoms in a normal host. Only a few bacteria can cause severe conjunctivitis in a normal host. To interpret conjunctival cultures you must know the normal flora of the eye,

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_____	036	Phenylbutazone/ Oxyphenbutazone
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evaluate the culture report, and base your judgement on the severity of the disease.

Cultures are not commonly needed in the diagnosis of conjunctivitis. They are expensive for the patient and in the garden variety conjunctivitis yield little useful information. If you are prone to lab work, you might try a gram or Giemsa stain[5-7] of the secretions first, and look for the predominant organism or cellular response. (Table 2) Remember that normal conjunctival flora may yield:

Staphylococci
 Epidermis, 75%
 Aureus, 25%

Diphtheroids, 70%
Proteus
Pseudomonas, 2-7%
Coliforms

Streptococci, 2-4%

Moraxella
Neisseria, rarely

To aid in interpretation if you decide on the laboratory route, consider an additional culture of the fellow eye to help eliminate the normal flora that might be present. Anytime you have serious doubts concerning

TABLE 2

GRAM STAIN CYTOLOGY IN CONJUNCTIVITIS

Staining Characteristics & Morphology	*Most Probable Organism*
Gram-positive	
Cocci; singly, in pairs, or in clusters	**Staphylococcus Sp.**
Cocci in chains	**Streptococcus Sp.**
Lancet-shaped diplococci	**Streptococcus Pneumoniae**
Rods	**Diphtheroids**
Filaments	**Fungal**
Gram-negative	
Diplococci	**Neisseria Gonorrhoeae** **N. Meningitidis** **N. Catarrhalis**
Diplobacilli	**Moraxella Sp.**
Rods	**Haemophilis Sp.**
Filaments	**Fungal**

Coliform organisms and fungi are considered to be conjunctival transients. Pseudomonas is an uncommon cause of conjunctivitis but a more common cause of a corneal ulcer.

the diagnosis, cultures should be done. The following are some situations in which a culture is required:[8-9]

1. Neonatal conjunctivitis
2. Hyperacute or severe conjunctivitis
3. Membranous conjunctivitis
4. Any severe chronic conjunctivitis
5. Corneal ulcer
6. Chronic lid margin disease

Chronic Conjunctivitis[10]

This entity can be quite difficult to work out and may be a diagnosis of exclusion. When these patients are seen on referral, the consultant's job is made easier by knowing what has not worked, and his diagnosis is usually aided by his referring colleagues.

Chlamydial or inclusion conjunctivitis is not an uncommon cause of a chronic follicular reaction.[11-13] You should be alert to this diagnosis if the red eye occurs in a sexually-active young adult. It may be unilateral or bilateral, is usually accompanied by a stringy mucoid discharge, and has a history of no response to any topical antibiotics. In its most chronic and severe form the superior cornea may be vascularized and scarred.

Chlamydia means "mantle body." A conjunctival scraping stained with a Giemsa technique may demonstrate these cytoplasmic inclusions that cap the nucleus or reveal the smaller elemental bodies. Immunofluorescent staining techniques are probably more accurate but are not readily available. Treatment is a gram of Tetracycline a day in divided doses for three or four weeks.

Some causes of chronic conjunctivitis are listed below:

1. Adverse drug reactions
2. Chlamydial conjunctivitis
3. Allergic
4. Tear dysfunction
5. Infectious and inflammatory disorder of lids
6. Rare viruses, fungi, parasites

Subconjunctival Hemorrhage

This entity is one of the most common ocular problems that tends to frighten a patient but also one of the most benign. Rupture of a small conjunctival vessel causes a bright red spot surrounded by normal conjunctiva. The hemorrhage may be spontaneous or precipitated by coughing, sneezing, or strenuous activity. There are no symptoms and vision is normal.

Usually no cause is found, but I usually check the blood pressure and inquire as to any history of blood or clotting disorder, especially if the hemorrhages are recurrent. The hemorrhage will undergo color changes much like a bruise and resolve in two or three weeks. If the hemorrhage is associated with significant trauma or any neurologic symptoms, obviously further evaluation is required.

Iritis

Common symptoms are injection, photophobia, moderate or severe pain, tearing, and occasionally some decrease in vision. Inflammatory debris may become adherent to the endothelium and if large enough, may be seen with the penlight looking like small dots which are called keratic precipitatosi. The pupil may be slightly constricted and may not dilate if posterior synechiae have bound the iris to the anterior lens capsule.

By far the most common cause of iritis is trauma. Any inflamation of the ocular adnexa may be an etiology such as sinusitis, orbital abscess or cellulitis, and severe dental caries.

Major systemic diseases considered in the diagnosis of uveitis are variable and numerous. Any bacteria, virus, fungus, rickettsia, protozoa, spirochete, or parasite that causes a systemic infection can cause iritis. Sarcoidosis, autoimmune diseases, or immediate and delayed hypersensitivity should be considered. Other possibilities include ankylosing spondylitis, herpes simplex or zoster, tuberculosis and syphilis. In addition to the anterior segment inflammation some diseases also may cause inflammation of the retina and vitreous: toxoplasmosis, peripheral uveitis, sarcoidosis, and tuberculosis.

Acute Glaucoma

Acute or angle closure glaucoma is a true ophthalmic emergency that could result in significant visual loss if not treated properly. Most glaucomas are chronic open angle and are asymptomatic. About 10 percent of the glaucomas involve a narrowing or closure of the angle between the cornea and iris which prevents exit of aqueous from the trabecular meshwork.

Both eyes may be involved although one eye may present with symptoms several years before the fellow eye. Patients complain of marked loss of vision and severe pain often with nausea. The pupil is usually fixed at mid-dilation and will not constrict with a penlight. The eye will be injected, the cornea may appear hazy, and if you palpate the globe through the upper lid it will feel rock hard compared to the fellow eye. (Table 3)

Episcleritis[14-15]

Patients with this perplexing disease complain of significant pain and redness that is very localized. The area of conjunctival injection usually occurs in the horizontal median between the insertion of the rectus muscles and the corneoscleral limbus. It may occur in other than the three or nine o'clock areas but that is not common. There is no discharge and the other areas of conjunctiva are normal. There may be localized conjunctival edema.

There is a nodular form of episcleritis in which you will see a small round to oval elevation a few millimeters in diameter. This form must be distinguished from nodular scleritis which is more severe in degree, may be necrotizing, and is more difficult to treat. Episcleritis may be self-limiting and is often chronic and recurrent over many years. There is a soft association of episcleritis with rheumatoid arthritis and very occasionally gout. Its cause is unknown.

The Dry Eye

Tear deficiencies are among the most common of ocular problems and a frequently overlooked diagnosis. These patients are usually comfortable on awakening, but as their tear film begins to evaporate later in the day their misery begins.[16-18]

Dry-eye sufferers complain of a gritty, sandy, foreign-body sensation, mild conjunctival injection, frequent blinking and eye rubbing, and some mucous strands they intermittently wipe from the eye. These patients usually tell you they get temporary relief from almost any type of drop and their symptoms may vary from day to day.

Anything that evaporates their tears makes them symptomatic — hair or clothes dryer, windy day, heating or air conditioning ducts. The normal flushing action of their tears is diminished so these patients seem more irritated than they otherwise would be by smoke or other irritants. Conjunctivitis may be more common in this group of patients.

On the slit lamp one sees a decreased tear meniscus, mucous excess in the precorneal tear film, and a rapid break up of the tear film seen with fluorescein. A diagnosis can also be aided with use of Schirmer strips. After a drop of topical anesthetic and blotting of the eye to remove excess fluid, these can be hooked over the lower lid and wetting of the strip after five minutes measured. These strips are readily available, can be used in anyone's office, and can easily be used by an assistant.

Blepharitis

This chronic inflammation of the eyelid margin accounts for many red eyes and often goes unrecognized and diagnosed. Patients may have complaints referable to the eyelid such as itching and discomfort.[19] Their symptoms may be of the globe such as chronic redness and irritation even though the eyelid is the source of the disease.

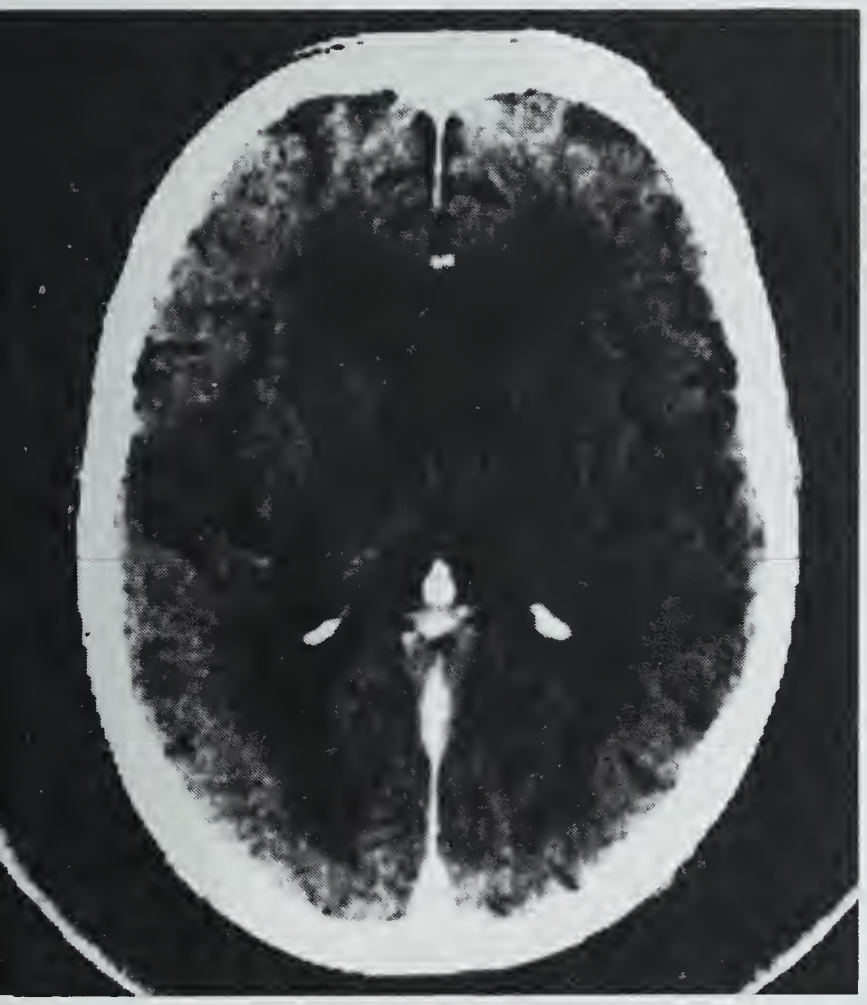
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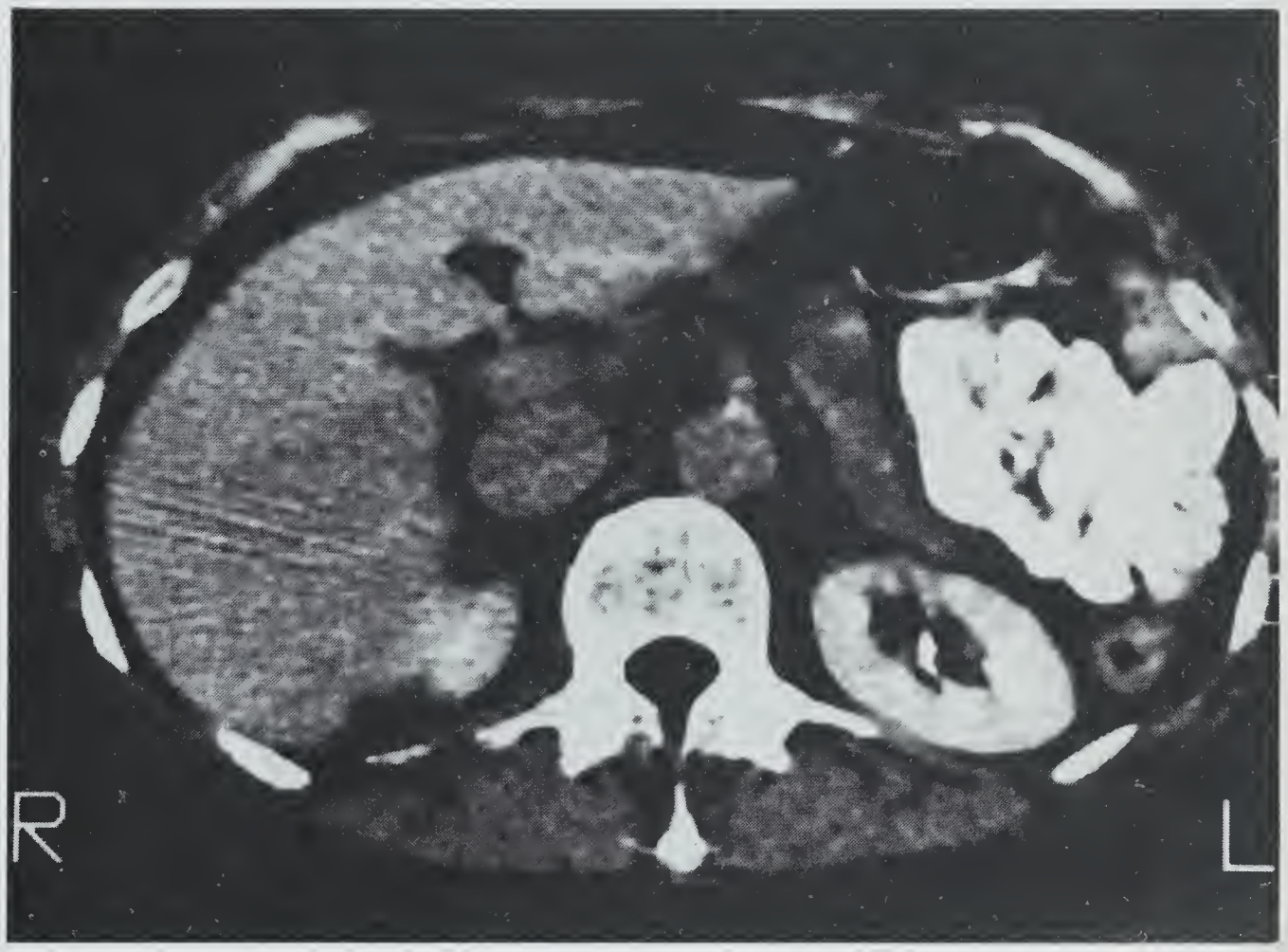
DIFFERENTIAL DIAGNOSIS OF THE RED EYE

	Conjunctivitis	*Iritis*	*Acute Glaucoma*
Vision	**Nl or intermittent blurring**	**Slight decrease**	**Marked decrease**
Discharge	**Mucoid or exudative**	**None**	**None**
Pain	**Usually minimal**	**Sharp, severe worse in light**	**Very severe**
Pupil Size	**Normal**	**May be constricted**	**Fixed at mid-dilation**
Pupillary Light Response	**Normal**	**Normal or minimal response**	**Minimal or no response**
Intraocular Pressure	**Normal**	**Normal**	**Elevated**
Conjunctival	**Diffuse**	**Diffuse and peri-limbal**	**Diffuse often with limbal prominence**
Corneal Appearance	**Clear**	**Usually clear**	**Hazy**

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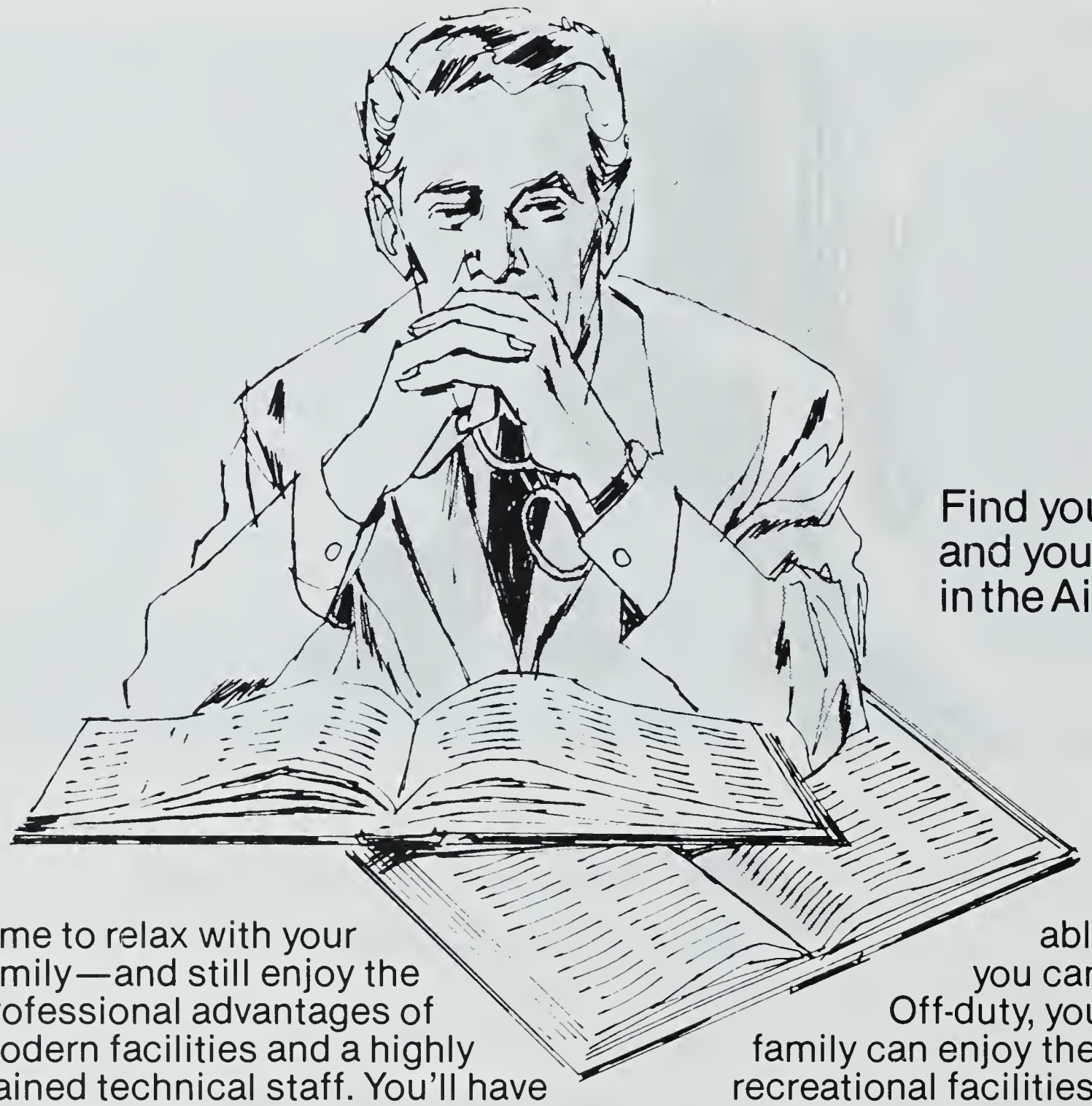
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Look for thickening of the eyelid margins, recurrent redness of the eye or the eyelid, crusty debris over the eyelid surface, and occasionally recurrent chalazia or hordeola. The disease may be very anterior in the eyelid or involve the more posterior meibomian glands.

For millions of people a tear deficiency is a chronic nuisance, but it may be more serious. Corneal vascularization and scarring, corneal thinning with perforation, or recurrent filamentary keratitis may cause loss of vision. Keratitis sicca not infrequently accompanies rheumatoid arthritis, and the treatment of the dry eye is equally important to these patients' vision as is treatment of the arthritis is to their motility.

Steroids and the Eye

The use of a topical steroid at the wrong time can lead to an ocular disaster more quickly than almost any other drug. Use a steroid at the right time and everything gets better. Use it at the wrong time, and for awhile things may seem to get better but the euphoria does not last.

What makes steroids such a double-edged sword? Topical steroids will inhibit the re-epithelialization of any corneal defect. When the epithelium regenerates, collagenase[20] is produced and if steroids are used the effect of the collagenase is enhanced many fold. The cornea may digest itself, self destruct, and perforate.

Steroids also immunosuppress the eye and will allow more rapid replication of many organisms than would otherwise occur, especially herpes simplex or any fungus. Fibroblast activity is suppressed, so in addition to allowing the cornea to melt, it is prevented from healing by scar formation.

There is certainly a place for the use of a steroid in the treatment of severe viral keratoconjunctivitis, allergic conjunctivitis, intraocular inflammation, and even in treatment of stromal but not epithelial herpes. The diagnosis and the timing of their use is critical, and they should not be used casually in treatment of the red eye unless you are absolutely sure you will do no harm.

The ability to examine and follow a patient on the slit lamp is the only real assurance that you can avoid trouble before it begins. At the very least before any steroid is used, the cornea should be stained with fluorescein and if any epithelial defect or stain is seen, the patient should be referred for an ophthalmologic exam.

Let me give you a recent example. A housewife was seen by her physician complaining of redness and discomfort in one eye only. She had a history of asthma and other allergic problems. The patient had been using Neosporin on her own for a week with no results. Cortisporin was prescribed and for a few days the eye quietened down. A week later I saw the patient with a central corneal ulcer due to the fungus fusarium solani. The patient's original problem was probably that of a corneal abrasion that was undiagnosed. The steroids added to rather than solved the problem.

An intact corneal epithelium is an excellent barrier to nearly all organisms. Only Neiserria Gonococci[21] and C. Diphtheria will readily penetrate an intact epithelium. A great premium must be placed on proper treatment and early resolution of any epithelial break. When steroids are added to any cornea that has an epithelial defect, any organism may grow and ulcerate its host. It is imperative that steroids never be used unless the condition of the epithelium is known.

We all make errors, but be very wary of the use of topical steroids unless you can follow patients closely with a slit lamp. If you do not want to do that excepting a few special situations, consider letting an ophthalmologist follow these patients who may require topical steroids along with you.

Treatment

Viral Conjunctivitis

If you are reasonably sure of this diagnosis and if your patient is compliant and reliable, you may not choose an antibiotic. For comfort a topical decongestant or artificial tear is appropriate.

Albalon® or Albalon A®
Vasocon® or Vasocon A®
CLERZ®
Prefrin®, Soothe®, Degest®

Bacterial Conjunctivitis

For the bugs that affect the front of the eye, sulfa is the first choice of most ophthalmologists. A toxic keratitis due to sulfa is much less frequent than to neomycin.

Chloramphenicol is also an excellent antibiotic but should be used with caution over a long period of time. There are at least two cases of marrow suppression and deaths in patients using topical chloramphenicol. Both of these patients used the antibiotic over four months.

Sulamyd® or Bleph-10® (sulfacetamide)
Chloroptic® or Ophthochlor® (chloramphenicol)
Tobrex® or Genoptic® (aminoglycosides)
Neosporin® (neomycin, polymyxin, gramicidin) — "old triple"

Spontaneous Subconjunctival Hemorrhage

1. Observation, reassurance
2. If recurrent, check CBC and blood pressure

Iritis

1. Topical steroids and cycloplegics
2. Ophthalmologic referral

Acute Glaucoma

1. Osmoglyn 1 cc/lb. PO mixed with fruit juice and ice. This comes in a 6 oz. bottle and the usual dose is 4 to 6 oz. This is 50% glycerin.

2. Pilocarpin® 2-4%, one drop in affected eye every 10 minutes times 6 initially.
3. Diamox® 500 mg. sequels PO or 250 mg. IM and 250 mg. PO.
4. If patient is nauseated, substitute Mannitol 20% for Osmoglyn. Dosage is approximately 1 gm/kg and is usually 250 to 350 cc. IV given over 45 minutes.
5. Ophthalmologic referral.

The Dry Eye

1. Hypotears®
2. Liquifilm® or Liquifilm Forte® (more viscous)
3. Tears Naturale®
4. Tears Plus®
5. Lacriserts®

Artificial tears can be used as often as every 30-60 minutes if needed and the patient can titrate his own dosage schedule. There are some differences between various tear substitutes in pH, preservative, and active ingredients. I find that the simplest solution is to suggest a number of different types of artificial tears and let patients try them in sequence. Let them choose their own. Occasionally one-half normal saline is used as it is preservative-free and may be less irritating. It should be used with caution due to the possibility of contamination. Other agents may be used in more severe corneal involvement. Punctal plugs or punctal occlusion may be used in severe keratitis sicca.

Episcleritis

1. Topical steroids are usually required.
2. If unresponsive, non-steroidal anti-inflammatory agents are indicated especially if severe and chronic.
3. Systemic steroids are rarely needed.

Blepharitis

1. Lid hygiene — with cotton tip applicators that are moistened with water or a dilute solution of baby shampoo.
2. Topical antibiotic ointment to lid margin after the lid scrubs such as Ilotycin (Erythromycin).
3. Occasionally systemic Tetracycline may be needed for up to three months to treat posterior lid dysfunction.
4. Topical steroids may be used on the lid margin or in the eye especially in involvement of the cornea in staph hypersensitive keratitis.

Suggestions for Ophthalmic Referral

Any decrease in usual acuity
A sudden change in visual field
Severe conjunctivitis with copious discharge
Severe lid edema
Chronic injection of unknown etioloty
A change in corneal clarity
Severe pain or photophobia

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Remember: Never consider using steroids unless the cornea does not stain, you are very sure of the diagnosis, and you are able to follow the patient closely. To be safe, an ophthalmic consult is recommended.

Summary

Not all red eyes lend themselves to easy diagnosis even with the aid of a slit lamp or an indirect ophthalmoscope. In most instances with a short history and a penlight exam of the eye, you can usually head in the right direction and avoid problems. When steroids are considered, use the utmost caution because they can cause irreversible damage if their use is not appropriate. Cultures are usually not needed except in special circumstances, and they do not always provide useful information.

All of our efforts are directed toward preservation of vision. So if a patient complains about any decrease in his visual acuity, I feel that these patients should be referred as soon as possible.

Physicians in Alabama do an excellent job of management of the red-eye patient. Initial treatment and subsequent management of the red eye is well within the purview of any practicing physician. The ophthalmologist becomes involved in the primary, secondary, and tertiary levels of care of these patients as a consultant or as primary physician.

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Yet another benefit Valium affords is flexibility. Available in 2-mg, 5-mg and 10-mg scored tablets, Valium enables you to titrate dosage to individual patient needs. For the geriatric patient, a starting dosage of 2 to 2½ mg once or twice a day is recommended. And, for patients who forget or skip medication, you can prescribe Valrelease™ (diazepam/Roche) 15-mg slow-release capsules, knowing that Valrelease will assure all the benefits of Valium 5 mg *t.i.d.* with the convenience of once-a-day dosage.

Discontinuation of Valium (or Valrelease) is typically as smooth as its start in short-term therapy. However, Valium and Valrelease should be discontinued gradually after more extended treatment. As you diminish dosage, the built-in tapering action of Valium and Valrelease will help avoid rapidly recurring anxiety symptoms and symptoms of withdrawal, and will help ease the patient's transition to independent coping when therapeutic goals have been achieved.

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Indications: Management of anxiety disorders, or short-term relief of symptoms of anxiety. Anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic. Symptomatic relief of acute agitation, tremor, impending or acute delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: relief of skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome. *Oral forms* may be used adjunctively in convulsive disorders, but not as sole therapy. *Injectable form* may also be used adjunctively in: status epilepticus; severe recurrent seizures; tetanus; anxiety, tension or acute stress reactions prior to endoscopic/surgical procedures; cardioversion.

The effectiveness of diazepam in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindications: Tablets or capsules in children under 6 months of age; known hypersensitivity; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: As with most CNS-acting drugs, caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of predisposition to habituation/dependence.

> ***Usage in Pregnancy:*** **Use of minor tranquilizers during first trimester should almost always be avoided because their use is rarely a matter of urgency and because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

ORAL: Advise patients against simultaneous ingestion of alcohol and other CNS depressants.

Not of value in treatment of psychotic patients; should not be employed in lieu of appropriate treatment. When using oral forms adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may be associated with temporary increase in frequency and/or severity of seizures.

INJECTABLE: *To reduce the possibility of venous thrombosis, phlebitis, local irritation, swelling and, rarely, vascular impairment when used I.V.: inject slowly, taking at least one minute for each 5 mg (1 ml) given; do not use small veins,* i.e., *dorsum of hand or wrist; use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Injectable Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.*

Administer with extreme care to elderly, very ill, those with limited pulmonary reserve because of possibility of apnea and/or cardiac arrest; concomitant use of barbiturates, alcohol or other CNS depressants increases depression with increased risk of apnea; have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosage at least 1/3, administer in small increments. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs.

Has precipitated tonic status epilepticus in patients treated for petit mal status or petit mal variant status. Not recommended for OB use.

Efficacy/safety not established in neonates (age 30 days or less); prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence; can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of diazepam, *i.e.*, phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function; avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed and tolerated).

The clearance of diazepam and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.

INJECTABLE: Although promptly controlled, seizures may return; readminister if necessary; not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures; use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, observed in patients during and after diazepam therapy are of no known significance.

INJECTABLE: Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia.

In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm/pain in throat or chest have been reported.

Dosage: Individualize for maximum beneficial effect.

ORAL: *Adults:* Anxiety disorders, relief of symptoms of anxiety—Valium (diazepam/Roche) tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 Valrelease capsules (15 to 30 mg) daily. Acute alcohol withdrawal—tablets, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; or 2 capsules (30 mg) the first 24 hours, then 1 capsule (15 mg) daily as needed. Adjunctively in skeletal muscle spasm—tablets, 2 to 10 mg t.i.d. or q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily. Adjunctively in convulsive disorders—tablets, 2 to 10 mg b.i.d. to q.i.d.; or 1 or 2 capsules (15 to 30 mg) once daily.

Geriatric or debilitated patients: Tablets—2 to 2½ mg 1 or 2 times daily initially, increasing as needed and tolerated (see Precautions). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose.

Children: Tablets—1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use in children under 6 months). Capsules—1 capsule (15 mg) daily when 5 mg oral Valium has been determined as the optimal daily dose (not for use in children under 6 months).

INJECTABLE: Usual initial dose in older children and adults is 2 to 20 mg I.M. or I.V., depending on indication and severity. Larger doses may be required in some conditions (tetanus). In acute conditions injection may be repeated within 1 hour, although interval of 3 to 4 hours is usually satisfactory. Lower doses (usually 2 to 5 mg) with slow dosage increase for elderly or debilitated patients and when sedative drugs are added. (See Warnings and Adverse Reactions.)

For dosages in infants and children see below; have resuscitative facilities available.

I.M. use: by deep injection into the muscle.

I.V. use: inject slowly, take at least one minute for each 5 mg (1 ml) given. Do not use small veins, i.e., *dorsum of hand or wrist. Use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute Valium with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.*

Moderate anxiety disorders and symptoms of anxiety, 2 to 5 mg I.M. or I.V., and severe anxiety disorders and symptoms of anxiety, 5 to 10 mg I.M. or I.V., repeat in 3 to 4 hours if necessary; acute alcohol withdrawal, 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary. Muscle spasm, in adults, 5 to 10 mg I.M. or I.V. initially, then 5 to 10 mg in 3 to 4 hours if necessary (tetanus may require larger doses); in children *administer I.V. slowly*; for tetanus in infants over 30 days of age, 1 to 2 mg I.M. or I.V., repeat every 3 to 4 hours if necessary; in children 5 years or older, 5 to 10 mg repeated every 3 to 4 hours as needed. Respiratory assistance should be available.

Status epilepticus, severe recurrent convulsive seizures (I.V. route preferred), 5 to 10 mg adult dose administered slowly, repeat at 10- to 15-minute intervals up to 30 mg maximum. Repeat in 2 to 4 hours if necessary, keeping in mind possibility of residual active metabolites. Use caution in presence of chronic lung disease or unstable cardiovascular status. Infants (over 30 days) and children (under 5 years), 0.2 to 0.5 mg slowly every 2 to 5 min., up to 5 mg (I.V. preferred). Children 5 years plus, 1 mg every 2 to 5 min., up to 10 mg (slow I.V. preferred); repeat in 2 to 4 hours if needed. EEG monitoring may be helpful.

In endoscopic procedures, titrate I.V. dosage to desired sedative response, generally 10 mg or less but up to 20 mg (if narcotics are omitted) immediately prior to procedure; if I.V. cannot be used, 5 to 10 mg I.M. approximately 30 minutes prior to procedure. As preoperative medication, 10 mg I.M.; in cardioversion, 5 to 15 mg I.V. within 5 to 10 minutes prior to procedure. Once acute symptomatology has been properly controlled with injectable form, patient may be placed on oral form if further treatment is required.

Management of Overdosage: Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure; employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension. Dialysis is of limited value.

How Supplied:

ORAL: Valium scored tablets—2 mg, white; 5 mg, yellow; 10 mg, blue—bottles of 100 and 500; Prescription Paks of 50, available in trays of 10; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25 and in boxes containing 10 strips of 10.

Valrelease (diazepam/Roche) slow-release capsules—15 mg (yellow and blue), bottles of 100; Prescription Paks of 30.

INJECTABLE: Ampuls, 2 ml, boxes of 10; Vials, 10 ml, boxes of 1; Tel-E-Ject® (disposable syringes), 2 ml, boxes of 10. Each ml contains 5 mg diazepam, compounded with 40% propylene glycol, 10% ethyl alcohol, 5% sodium benzoate and benzoic acid as buffers, and 1.5% benzyl alcohol as preservative.

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DOTHAN, ALABAMA: Immediate opening for a staff psychiatrist at large solidly funded CMHC. Attractive sunbelt location in a progressive growing community of 50,000 which serves as the commercial, educational, and medical center for a large area of Southeast Alabama, Northwest Florida, and Southwest Georgia. The area offers many recreational opportunities including Gulf beaches less than 70 miles away. Dothan has the amenities of a large community without the drawbacks of a large city. Salary range $40,000 to $65,000 with an excellent fringe benefit package including malpractice insurance. Contact: Thomas G. Thieman, M.D., Medical Director, Wiregrass Mental Health System, P.O. Drawer 1245, Dothan, Alabama 36302 or call (205) 794-0731.

SUNBELT-OFFICE for long term lease or sale. 3300 sq. ft. Community of 35,000. Great opportunity for unopposed ent., derm., psy., opthal. practice, P. O. Box 864, Spanish Fort, AL.

I am seeking a physician partner to share a solo practice of primary care and Internal Medicine in Cullman, Alabama. This physician should be an Internist or Family Practitioner, Christian, have a high priority for the family, desire adequate time away from medicine and at the same time desire to practice quality medicine, learn new medical skills and stay up to date with continuing medical education. If interested reply to P. W. Davis, M.D., 402 Arnold St. NE, Suite 104, Cullman, Alabama 35055.

PRACTICE OPPORTUNITIES ARE AVAILABLE FOR PHYSICIANS: One or two Family Practitioners, Internist, OB/GYN and Pediatrician in Western Alabama. Opportunities include: minimum guaranteed salary, first year office, office personnel, billings prepared/processed, office furniture, equipment, utilities. Physicians' building recently built adjacent to modern 72 bed hospital. All site visits including spouse and relocation expenses will be paid. Write: Frank Schupp, Health Development Corporation, 2416 21st Ave., S Suite 205, Nashville, TN 37212 or Telephone: (615) 292-5500.

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GENERAL INTERNIST — To associate with two young, well established Internists in hospital/office practice in Montgomery, Alabama. 420 bed hospital, well equipped with new CCU, telemetry, etc. Board certified, American University trained. Terms very liberal. Beautiful small city near lakes, Gulf Coast. Please send curriculum vitae to Drs. Robinson & Strong, 1722 Pine St., Suite 1001, Montgomery, AL 36194.

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FAMILY PHYSICIANS desperately needed to locate in West Central Alabama rural communities, one hour from Birmingham. Faculty appointment with Family Practice Center at University of Alabama if qualified. Join established practice or work individually. Salary of $42,000 to $65,000 guaranteed until practice is self-sufficient. Generous fringe benefits include life, disability, health, retirement, and malpractice insurance, two weeks continuing education, and three weeks annual leave. All equipment, including X-ray and lab, furniture, and supplies provided. Management services including personnel, payroll, tax reports, and billing provided. If invited to visit, all expenses will be paid. All moving expenses covered. Write Health Development Corporation, P.O. Box 1486, Tuscaloosa, Alabama 35403, or telephone Frank Cochran, *collect* at 758-7545 for more information.

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President's Page

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result cefazolin and cephadrine were retained as the only peritoneal and oral dosage forms of cephalosporins. This resulted in a decline in cephalosporin cost of $268,000 in a twelve month period. It would be no surprise if pharmacy formularies result from cost reimbursement based on DRGs in the immediate future.

TABLE I
NET BENEFITS OF ANTIMICROBIAL PROPHYLAXIS FOR VAGINAL OR ABDOMINAL HYSTERECTOMY*

	Ampicillin† $	*Cefazolin*‡ $	*New Cephalosporins,*† $
Cost of 3-dose prophylaxis	**8**	**33**	**120**
Vaginal hysterectomy			
Net benefit of 3-dose regimen			
Per patient	**517**	**492**	**405**
Per 250,000/yr in United States	**129×10^6**	**123×10^6**	**101×10^6**
New benefit of 3-day regimen§			
Per patient	**501**	**426**	**165**
Per 250,000/yr in United States	**125×10^6**	**106×10^6**	**41×10^6**
Abdominal hysterectomy			
Net benefit of 3-dose regimen			
Per patient	**127**	**102**	**15**
Per 400,000/yr in United States	**50×10^6**	**40×10^6**	**6×10^6**
Net benefit of 3-day regimen§			
Per patient	**111**	**36**	**−225**
Per 400,000/yr in United States	**44×10^6**	**14×10^6**	**-90×10^6**

*** Effect of using different drugs and a longer duration.**

† Assuming these agents have the same preventive fraction as cefazolin.

‡ Cefazolin was the antimicrobial evaluated in the clinical trial.

§ Cost of the three-day regimen estimated to be triple the three-dose regimen.

The pharmacists remarks on timing of orders were reasonable. This is not to say that an order for TPN, antibiotic or other medication should not be ordered or changed when in the best interest of the patient. There are, however, ample occasions when consideration of an already prepared drug or peritoneal feeding will result in savings.

Becoming familiar with your pharmacist's routine should be productive. Better still an opportunity at staff meeting to discuss these and similar administrative cost effective techniques should be considered. The outpatient pharmacist observed that he sees evidence that patients frequently do not adequately understand the potential of their prescription.

In addition to your verbal instructions, PMI (patient medication instructions) sheets can be helpful. I have found them appreciated. The AMA invested over $1 million, and major pharmaceutical companies nearly $2 million, to produce and print pads of these information sheets for, at present, 40 commonly used drugs. For single entity drugs, such as verapamil, the generic name is used; for pharmacological classes such as corticosteroids, the class will be designated. Black lines are provided for specific identification and instructions. These may be purchased from AMA — PMI program, 535 North Dearborn Street, Chicago, Illinois 60610.

Finally, one respondent summarized that, ''Many bumps are home grown.'' I feel sure that he meant more deliberate communication with our patients, verbal and/or written — thoughtful selection and timing of drug orders, and more complete utilization of the pharmacist's training and practical knowledge can result in improved care, reduction of costs, and maintenance of physician's image.

Tom

Executive Director

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irrelevant threat to take the State Committee away from the Association unless it kowtows to whatever the demand of the monent is? Is the Association hostage to an archetype?

Public Health is no less important today than a century ago. But the modern system relies primarily on skilled professionals rather than the physician community at large. And there have been many other revolutionary changes, so that there is really no way of comparing the situation in 1983 to that of 1883.

And yet, another school of thought holds, isn't it precisely because of the State Committee that the Health Department has functioned so well? If that is true, proponents of this view say, isn't it a case of trying to fix something that isn't broken? As a corollary to that, they continue, if doctors have performed so well for so long in this role, isn't it worth all the criticism and complications to continue in the present capacity?

It is a provocative subject that will, I am sure, be the subject of much formal and informal discussion in the months ahead.

Tom



Mrs. Julius E. Dunn, Jr.
President, A-MASA

Are You a Joiner?

Are you a joiner? Don't bristle! Everyone alive is a joiner. Our first experience in joining takes place the moment we are born — we join the human race. As we mature we join schools, clubs, churches and other organizations. Many of us join with our mates in forming families of our own.

Joining is an accepted way of life in our civilization. Through interaction with others, we learn. Plautus said, ''No man is wise anough by himself.'' Our wise physicians are distinct joiners. They join with God, other physicians, and health-related personnel for the healing and well-being of their patients.

Physicians are trained as humanitarians, and as their spouses we become committed to work hand in hand with them. Over 80,000 spouses of physicians have realized that the privilege of becoming a member of the AMA Auxiliary is quite special.

Being a member gives us the opportunity to know and work with other physicians' spouses and to associate with one of the most constructive health organizations in the community. Furthermore, it gives us a voice in local, state, and national affairs of the AMA-A, and the use of an unique national clearinghouse for community health programs.

As members we receive FACETS newsletter and magazine (published specifically for physicians' spouses) and receive other AMA-A publications upon request. We have the opportunity to participate in leadership training and educational seminars and to improve health care and medical practices by impacting on legislation. The auxiliary helps provide financial assistance to medical students and schools and supports important scientific and medical research. On the state level, the AMASA newsletter, which is published quarterly, keeps the members abreast of the statewide happenings.

In taking ''Alabama Auxiliary in Action'' as the theme for my presidency, I pay tribute to the Alabama ''joiners'' who have provided our state with membership increases for 18 consecutive years! This is unprecedented in the AMA Auxiliary. We are indeed proud of this increase, but more joiners are needed. Our auxiliary is seeking members who are active, productive leaders in the community and know the value of working in a team relationship on county, state and national levels.

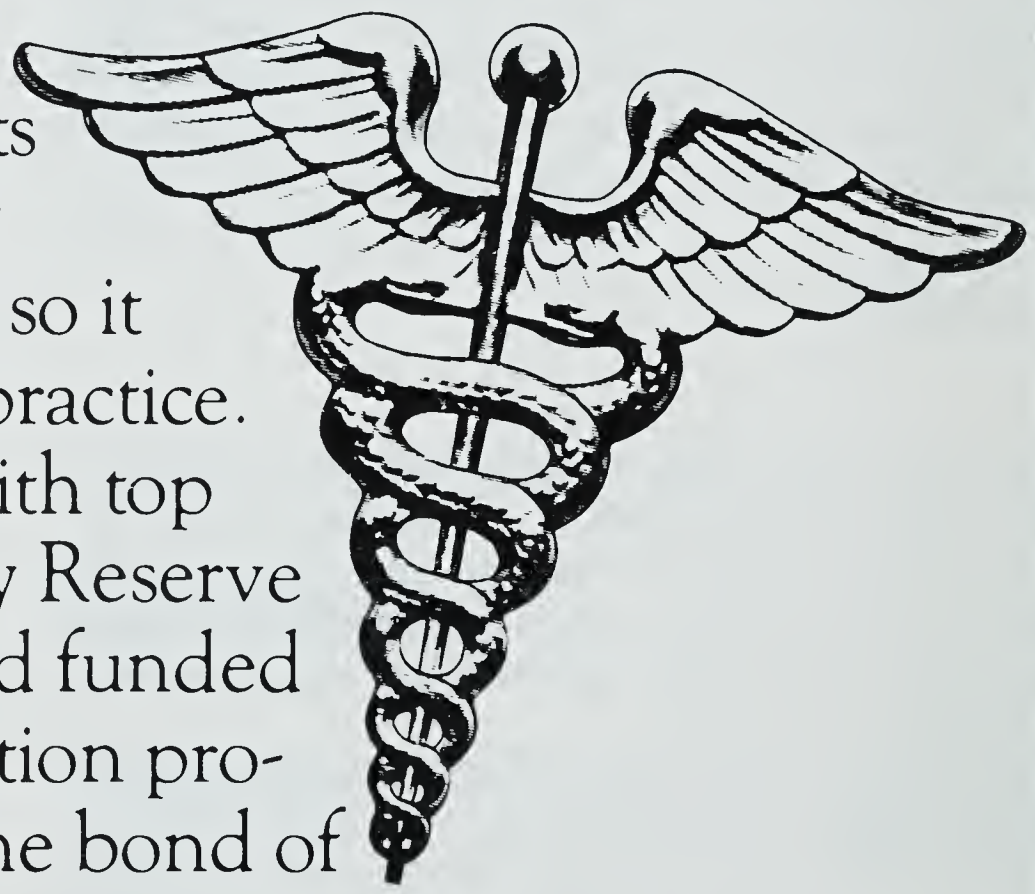
As a member of a small county auxiliary, I have found that joining with other physicians' spouses has brought me much joy and fulfillment. Since we all have a common bond, we can appreciate the problems and successes which cannot be understood as well by any other group. This has been the most rewarding aspect of my membership in the AMA-A and AMASA.

Whether one is from a populous county or small, or even an unorganized county, joining the auxiliary may be one of the most significant actions a physician's spouse may ever take.

Physician, please encourage your spouse to be a joiner, and help us keep the ''Alabama Auxiliary in Action''!

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